RAILROAD

MAGAZINE | FEBRUARY 50c

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The powerful OBJECTIVE lenses are the crowning achievement of the 99 year old German firm! Far different indeed, from the moulded plastic kind stamped out by the million. The objectives are Magnesium Fluoride Coated to control glare—an expensive, precision process found only in expensive binoculars! Not stamped out by the million! Each and every lens is GROUND to high tolerances, then checked for accuracy. This takes much longer, costs 20 to 30 times more! But it's worth it! You get CRYSTAL-CLEAR viewing. Your eyes don't suffer the strain of excessive distortion and "ghost" images so common in cheap binoculars. Were you to spend $25.00, we could not give you better quality lenses!

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How I foxed the Navy

by Arthur Godfrey

The Navy almost scuttled me. I shudder to think of it. My crazy career could have ended right there.

To be scuttled by the Navy you've either got to do something wrong or neglect to do something right. They've got you both ways. For my part, I neglected to finish high school.

Ordinarily, a man can get along without a high school diploma. Plenty of men have. But not in the Navy. At least not in the U. S. Navy Materiel School at Bellevue, D. C., back in 1929. In those days a bluejacket had to have a mind like Einstein's. And I didn't.

"Godfrey," said the lieutenant a few days after I'd checked in, "either you learn mathematics and learn it *fast* or out you go. I'll give you six weeks." This, I figured, was it. For a guy who had to take off his shoes to count above ten, it was an impossible assignment.

I was ready to turn in my bell-bottoms. But an ad in a magazine stopped me. Here, it said, is your chance to get special training in almost any subject—mathematics included. I hopped on it. Within a week I was enrolled with the International Correspondence Schools studying algebra, geometry and trig for all I was worth.

Came week-end liberty, I studied. Came a holiday, I studied. Came the end of the six weeks, I was top man in the class. Within six weeks I had mastered two years of high school math, thanks to the training I'd gotten.

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RAILROAD MAGAZINE

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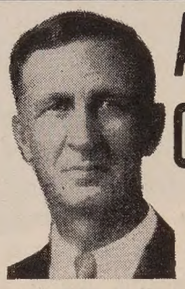

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"Made my first $100 from spare time work before I finished my course. Now I average better than $10 a week, spare time."—Frank Borer, Lorain, Ohio.

"I've come a long way in Radio and Television since graduating. Have my own business on Main Street."—Joe Travers, Asbury Park, New Jersey.

"I didn't know a thing about Radio. Now have a good job as Studio Engineer at KMMJ."—Bill Delzell, Central City, Nebraska.

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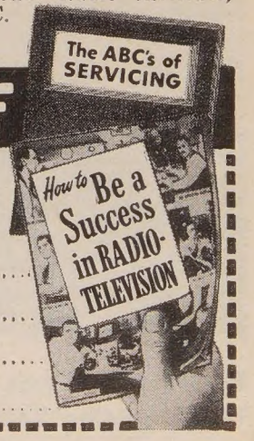

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ALTHOUGH Stewart Hall Holbrook has written a dozen successful books, including *The Story of American Railroads* (Crown Publishers, New York, 1947), and hundreds of magazine articles, our current issue marks his first appearance in *Railroad Magazine*.

Holbrook

Holbrook hails from Vermont. He first became interested in the Canadian-born Jim Hill when, as a youth, he headed West and got a reporting job on *The Winnipeg Telegram*. The mighty Hill was then basking in the Indian summer of his career, running the Great Northern from his castle-shaped home in St. Paul, and casting his lengthened shadow across the international border. But in those wild free days Holbrook had little desire to write about Hill or anyone else. Life itself was too alluring. There were too many things to see and do. So he left Winnipeg and hit the adventure trail.

A World War I veteran, a lumberjack for years, Stewart Holbrook knocked about from one place to another without finding time to attend college, but, ironically enough, has lectured on American history at big universities. His wife is a trained nurse, skilled in arts and crafts. They live at Portland, Ore. •

SIM WEBB'S description of the wreck in 1900 that killed Casey Jones (Nov. issue) is worth the price of a whole year's subscription," enthuses F. L. McClanahan, 121 8th St., Paris, Ky. "But one point is not clear. Where were the skipper and the flagman of the freight that was taking siding when Casey's train ran into it?"

One version is that both were in the caboose but jumped in time to escape injury. Another version, which Casey's friends and relatives have always denied, is that the flagman was on the job with a red lantern some distance behind his train. •

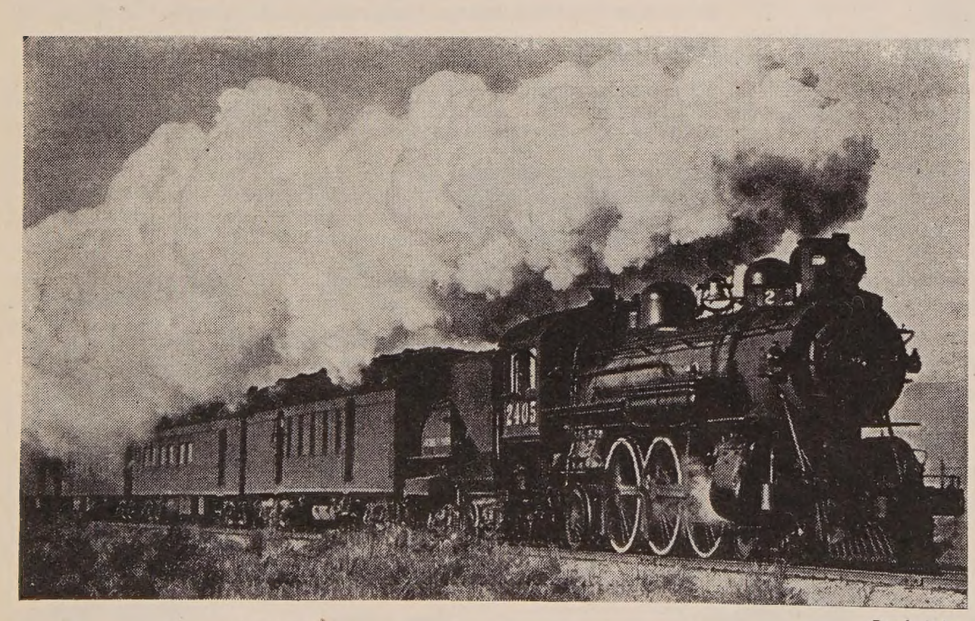
VETERAN of Union Pacific engine service and Lake Michigan trainferries but now retired, Nels J. Lindahl, Box 476, Tacoma 1, Wash., writes: "At the age of 76 it is nice to read in your magazine about the kind of work I used to do." •

PERSONALLY," says Frank P. Donovan, Jr., railroad historian and former research editor of *Trains* magazine, 114 W. 45th St., Minneapolis 8, Minn., "I like *Railroad* because it caters to the rank and file and because it prints free-wheeling comments and letters from the men who run trains, line tracks, and issue train orders. It's a Carl Sandburg sort of magazine." •

SP men elected Patty Lamoreaux queen of the Salt Lake Division.

SAFETY QUEEN of the Southern Pacific's Salt Lake Division is beautiful Patty Lamoreaux, 17, of Carlin, Nev., who was elected at the division's annual safety picnic in Ogden, Utah. Patty's family were railroaders from away back. Her grandfather, W. G. Lamoreaux, had 50 years of Southern Pacific service, mostly as a hogger. Her mother was a telegraph operator on the Santa Fe for ten years. Her father, A. A. Lamoreaux, is an Espee freight conductor running between Carlin and Imlay.

"Being the daughter of railroaders," Patty writes, "puts you in touch with some of the world's finest people. It means just about everything I have in life, for where would we all be without railroads?" •



Fred Jukes

Patty's father was a small boy when this shot of Southern Pacific train No. 2, engine 2405, was made east of Elko, Nevada.

FRONT COVER shows a hostler in the west end of the Union Pacific yards at East Los Angeles, Calif. He and his helper (in the cab) have just taken a three-unit string of diesel power out of the backshop, where the locomotives were washed, fueled, and checked mechanically. Now the hostler is calling the dispatcher in the terminal

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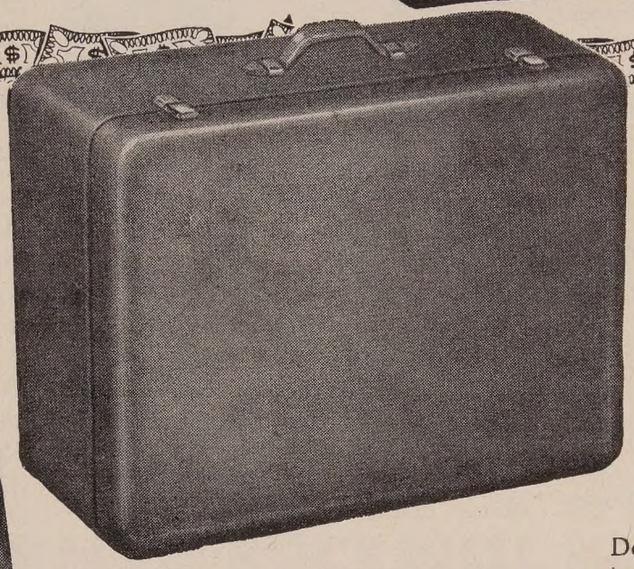

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You don't invest a penny of your money now or any time. You don't pay money for samples, for outfits, or for your own suit under our remarkable plan. So do as other men have done—mail the coupon now. Don't send a penny. Just send us the coupon.

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superintendent's office for clearance onto the main line. After getting it, he will take the units over the four miles to the Los Angeles Union Passenger Terminal, to be coupled onto No. 10, the streamlined *City of St. Louis.*

The color-photo is an Ektachrome (from Shostal), made by L. Willinger of Los Angeles. The locomotive is No. 1636, built by Alco in 1949. She is 54 feet long, weighs 240,000 pounds, has wheels 40 inches in diameter, and delivers 1600 horsepower. •

NEW YORK STATE'S new governor, William Averell Harriman, comes from a famous family. Years ago we ran an article about his father, Edward H., entitled "The World's Greatest Railroad Man." Unlike his sire, W. A.'s main interest is not transportation, but he did become chairman of the Union Pacific and an Illinois Central director.

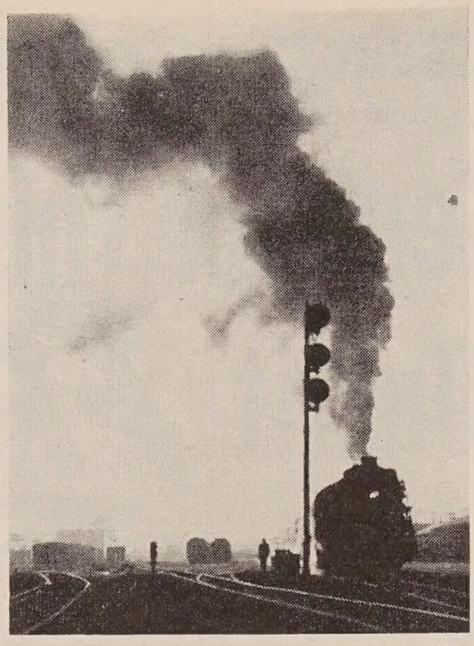
Wide World
Neuberger

Another victor in the last elections was Richard L. Neuberger of Portland, Ore., now a U.S. Senator. Dick is an authority on railroading in northwestern U.S. and southwestern Canada. He has had seven lead features in *Railroad Magazine,* dealing with the Northern Alberta, the SP&S, Seattle's station crisis, the Pacific Great Eastern, the Canadian National's Smithers Division, the British Columbia Electric, and electrified railroads.

His wife, Maureen, was elected to the Oregon State Legislature at the same time, making the Neubergers the only man-and-wife lawmaking team in America. •

RULE 12 in the Book of Rules issued by the Virginia & Tennessee in 1854 states: "Conductors and other trainmen must not attempt to influence passengers in favor of, or against, certain saloons, but must act impartially in this respect."

C&EI OBSERVES "Ladies' Day" every Tuesday by providing the fair sex with transportation to Chicago and return, from many points on the road, for the price of a one-way, adult, coach fare plus tax. The reduced fare applies whether a woman is traveling alone or in a group. To celebrate the first anniversary of Ladies' Day, the company served free coffee and birthday cake to female passengers aboard the *Hummingbird* and the *Georgian, Chicago & Eastern Illinois* luxury streamliners. •



Glenn I. Moe

Souvenir of Steam Age. Eastbound New York Central train *Paul Revere* at Elkhart, Ind., in 1946.

A SPECIAL TRAIN, 15 cars long, carried 230 people from many parts of the United States and Canada on the Canadian National's 18th annual excursion to Hudson Bay. The tourists, leaving from Winnipeg, got a good look at the booming north country. Some said they had first learned about these trips from reading an article in the June '54 *Railroad Magazine:* "North to Hudson Bay," by Thomas Taber. •

ODDITIES fascinate Irving Snyder, 144 El Dorado Ave., Danville, Calif., who urges readers to contribute such items to the *Mail Car.* He starts the ball rolling with these three:

(1) All passenger trains serving Oregon use the Portland Union Station—that is, all except the Spokane, Portland & Seattle run between Wishram, Wash., and Bend, Ore. Does a similar situation exist in any other state?

(2) How many places have so many railways as Gowrie, Ia., and yet so few passenger trains? (Other examples of cities with lots of railroads but few passenger trains are Des Moines, Ia., and Peoria, Ill.)

(3) State capitals with little or no rail service include Carson City, Nev.; Annapolis, Md., and Pierre, S. D. •

LONG AGO. "I read L. H. Jones's letter about stopping his train at the precise moment President McKinley's body was being lowered into its grave, September 16, 1901," writes A. C. Wiggs, Mapleton, Ia. "It recalled a similar order I received at that time. I was then a section foreman on the Chicago & North Western, Section 21, with eight men under me. We stopped work for five minutes and solemnly stood still, facing the east." •

NORTHERN PACIFIC engine 1364, built by Baldwin in 1902, has been installed in Point Defiance Park, Tacoma—not Seattle, as one reader stated in a recent issue—as a gift to the city, corrects L. A. Pierce, 1007 S. Lawrence St., Tacoma 6, Wash. It was the Great Northern that placed a locomotive on permanent display in a Seattle park. And at Tulsa, Okla., Mohawk Park now boasts a Frisco engine, No. 4500.

A 450-ton Chesapeake & Ohio locomotive, old 2701, has been unveiled as a permanent fixture in Centennial Park at Buffalo, N. Y., as a feature of the city's "Railroad Week," reports William C. Kessel, 25 E. Quaker, Orchard Park, N. Y. Engine No. 542 was presented by the Southern to the town of Tanglewood, S. C., where she is now resting in the local park after 51 years of rail service, we learn from John W. Anderson, Pine Hall, N. C. •

YOUR MAGAZINE is written technically enough to appeal to career railroaders and yet clearly and entertainingly enough to interest laymen," comments S. Sgt. Henry E. Baker, AF 13,370,356, General Delivery, Newport News, Va. "I believe that if other industries would use a similar type of journalism they would get a lot more public sympathy. My top preference is for fact articles, especially those that cover the building and operation of rail lines, followed closely by fiction stories with a factual background." •

GONE is one of America's shortest railroads, the 5-mile Waterville, laments Bert McAllister, 436 16th St., Bellingham, Wash. Rails were torn up last November. •

DIESELIZATION of the Rock Island has proved a boon for the town of Santa Rosa, N. M. The railroad owned three lakes, totaling 195 acres, near the town, but did not need them any longer to service steam locomotives. So it presented the lakes as a gift to

Santa Rosa, hard put for water for its growing population. This $200,000 property was transferred by William E. Hayes, former editor of *Railroad Magazine,* now Rock Island executive assistant in charge of public relations, on behalf of the president, J. D. Farrington. •

RAILWAY MAIL. Extension to the three West Coast states of the "experiment" in flying first-class mail at less than airmail rates would result in loss of mail revenue to railroads that could lead to the discontinuance of passenger trains and a large reduction in railroad employment, according to evidence laid before the Civil Aeronautics Board by a representative of 69 railroads. These 69 handle about 97 percent of all American railway mail. •

FOUNDER and guiding spirit of the Electric Railroaders Association E. J. Quinby, 30 Blackburn Rd., Summit, N. J., writes: "Most of us are aware that the wealth and abundance of hydro-electric power versus the high cost of coal and petroleum in Switzerland has resulted in almost universal electrification of the railways there. Also that steep grades, sharp curves, and long tunnels in Switzerland are more readily conquered by straight electric motive power than by any other.

"However, our most sophisticated electric railway enthusiasts and best informed engineers are likely to gasp with incredulity when they first see Swiss *steam* locomotives supporting pantographs. 'What's cooking?' is the natural query. The answer is, 'Water is being cooked into steam.'

"Such locomotives are equipped with electric heating units in the fireboxes rather than coal grates or oil burners. Being frugal and practical, Swiss engineers recognize the folly of destroying fine machines like modern steam locomotives still in good condition, as we are doing in America.

"Instead, they get many years of continued useful and economical life from such equipment, with the added advantage that these electrified steam locomotives perform on sidings and short branches which have not as yet been equipped with overhead wire. Acquiring a full head of steam out on the electrified main line, such locomotives can proceed for considerable distances and time on un-electrified track.

"What's wrong with *that* idea? If the Swiss can do it, why can't we? Does the difference in cost per KWH here warrant scrapping millions of dollars worth of our good steam locomotives prematurely?" •

WISECRACK. The engineer on a yard switcher was very cautious —like the hero in James Deragon's story, "Slow-Motion Switcher" (Jan. issue)—and wasn't moving the cars fast enough to suit the yardmaster, according to *Canadian National Magazine.*

"Kick those cars in here," the Y.M. shouted in exasperation, "and for Pete's sake get a move on!"

"I don't like to do that," replied the hogger. "It might put too much strain on my engine."

"Okay," yelled the ringmaster, "just run your engine into the roundhouse and take out one of the company's!" •

ICC WILL OUTLAW racial discrimination on trains and buses, according to predictions heard

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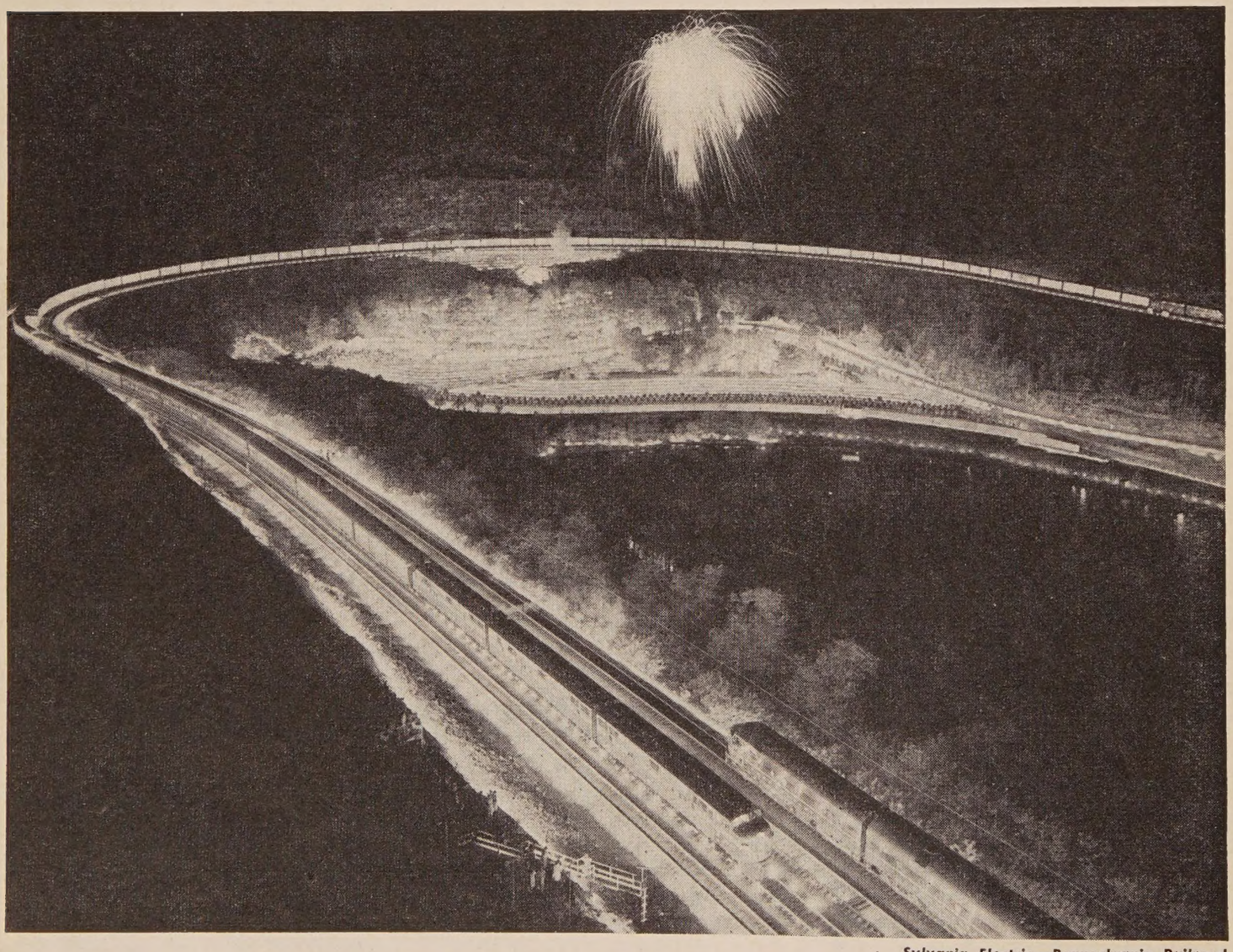
World-Famous Horseshoe Curve Celebrates 100th Birthday

THE PICTURE you see at the bottom of this page is, perhaps, the world's costliest photograph, if you consider the months of preparation and the equipment which were required to make it. Power to set off 6,000 flash bulbs came from three big generators, one at either end of the curve, the third at the apex. From these ran 31 miles of wire transmitting the power to all points around the Curve. The picture was taken from a specially-built tower, with the aid of walkie-talkies, a telephone system, and loudspeakers, 5½ miles west of Altoona, Pa., last October 20th.

Pennsylvania Railroad

Horseshoe Curve in 1870, freshly double-tracked, showing a balloon-stacked engine pulling a passenger train. (The Curve is now four-tracked.)



Sylvania Electric—Pennsylvania Railroad

This unique shot of the Curve was made at night; 6,000 flash bulbs flared simultaneously when the west-bound *Trail Blazer* passed an eastbound freight, both diesel-powered, and fireworks lit the sky.

today in Washington, D. C. This decision was expected to be handed down in January by the Commission in answer to a complaint against a group of 11 railroads. The Interstate Commerce Act says it's illegal to subject passengers to undue "prejudice or disadvantage." Hitherto the roads have gotten around this by pointing out they provide "separate but equal" facilities for white and colored passengers. The present case which the ICC will decide is based on the complaint that *separation* itself subjects the passenger to "prejudice or disadvantage." If the Commission upholds this complaint, segregation will be banned from travel, as it was from public schools by the Supreme Court. Privately, officials of railroads down South admit that the present segregation system on trains is too costly for them. •

ONE evening," writes C. B. Shenk, Rte. 7, Lancaster, Pa., "my twin sons and I were watching blue-ribbon trains on the Pennsy's Philadelphia Division. It was about nine P.M. One train roared westward at about 75 miles per hour with a hotbox on the first car behind the electric engine, showing a tail of fire like a comet probably ten feet long.

"Seeing it, I jumped into my car, with the boys, and burned up the road for about a mile till I got to a track phone. Then I told the operator what I had seen. After that I drove 14 miles along a highway beside the track. I saw that the train had been stopped, with a cherry red journal. I asked the conductor, 'How did you know it was hot?' He replied: 'I didn't, but they shut off the power overhead.' I told him that I had seen the fire and had reported it. Said he, 'They should give you something for that.' But they never did, not even a thank-you." •

THE PENNSY has announced that, as of January 1st, it would provide no more annual or trip passes for officials and employes of other roads traveling on business, nor will they request such passes on "foreign" lines for their own men. However, they will continue to issue passes for vacation and emergency trips and will apply for free rides for their personnel in similar cases. The New York Central and the New Haven have taken similar action. •

MEMORIES of his boyhood sweep over Ralph Emerson Woods, 106 Millar Ave., San Jose, Calif., when he reads past-history material in *Railroad Magazine*. "I was born," he says, "on a Nebraska cattle ranch in the 1880s and recall the 4-4-0 locomotives of my early youth, equipped with huge diamond stacks and screened to prevent prairie fires. I would sit high on a stockyard fence watching the men poke beeves up the chutes and into the cars for shipment to Chicago, meanwhile smelling the heady, pungent and altogether pleasant smoke that drifted from the stacks of the waiting engines. Even so, I am not too stubborn and old-fashioned to admit the economy and efficiency of modern power. I admire the sleek beauty of diesels and the luxury of streamlined trains."

As a result of reading "Romance of Locomotive Bells" (Sept. '49), he bought a big bronze bell from the Southern Pacific's 1634, then being scrapped at the Sacramento shops. "The bell and hanger together weigh 375 pounds," he adds, "and now adorn my front porch roof. I will probably give or bequeath them to a museum." •

Janet Wallace

WHEN Janet Wallace was a little girl living at Lefoy, Ont., Canada, passing trains thrilled her. Since then, as a university student, she spent two interesting summers working for the Canadian National's accounting department at Moncton, New Brunswick, writing various pay rolls and pay checks. "This work impressed me with the complexity of railway operations," she tells us, "and yet reducing each job to routine fundamentals gives the whole setup a simplicity."

Janet recently received a $100 musical scholarship. •

ILLINOIS CENTRAL won an unusual suit and received $124,000 in damages the other day in a McCracken County, Ky., circuit court. A bulldozer carried on a highway trailer had struck the abutment of an IC bridge near Childs, Ky. The impact threw the tracks out of line and led to the derailment of 23 cars in a freight train. Defendants were the driver of the truck and the owner, S. G. Oberling, Evansville, Ky. The jury's award to the railroad followed nearly three years of litigation. •

(Continued on page 73)

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ILLUSTRATION BY NICK EGGENHOFER

JAMES J. HILL'S GREAT ADVENTURE

Today's 8,300-Mile Great Northern System Is a Lasting Tribute to His Greatness. "I've Made My Mark on the Surface of the Earth," He Said, "And They Can't Wipe It Out"

by STEWART HOLBROOK

IT IS SIGNIFICANT of the man's complex character that of two of the best-remembered stories about James Jerome Hill, one paints him as a hero, the other as a villain.

Once, in a Dakota blizzard, when a section crew was trying to clear track for a stalled Great Northern passenger train, the president of the railroad came out to snatch the shovel from one man and send that bemused working stiff into Hill's private car for hot coffee, while Hill himself shoveled snow as though driven by steam. One after the other, the gandy dancers were spelled off and drank fine Java in unaccustomed elegance, while the Great Northern's creator and boss wielded a shovel. *That* was Jim Hill for you, at his best.

Again, because the mayor of a small Minnesota town objected mildly to all-night switching in his village, Hill swore that they should walk, and then he had the depot torn down and set up two miles away. That, too, was Jim Hill. His life is best summed up in his own words:

"Most men who have really lived have had, in some shape, their great adventure. The railway is mine."

The greatness of Hill's adventure is a matter of record. It can be measured in part by the thousands of miles of railroad that he built or acquired, the millions of acres homesteaded at his call, and by the fifty-three millions of dollars bequeathed to his heirs or to good works. When he died, Hill's empire ranged unbroken from the Canadian border to Missouri and Colorado, from the Great Lakes to Puget Sound and Oregon.

One of Hill's appealing qualities, which many think were somewhat limited, was that he was not an emperor whose knowledge of his realm came solely from his agents and cap-

JAMES J. HILL'S GREAT ADVENTURE
CONTINUED

Rogers eight-wheeler on the old St. Paul, Minneapolis & Manitoba, backbone of the Great Northern system.

tains. When the Great Northern's Number 1 train whistles for Sauk Center or Fargo or Wolf Point or Whitefish or Bonner's Ferry or Wenatchee, on its way two thousand miles across the top of the United States, the echoes scarcely find a stark butte or a mountain valley that Jim Hill himself did not know at first hand.

Most of Hill's country is decidedly northern in climate and character. They have *winter* there, a season that brought out the best in Jim Hill, a rugged man, born in Canada on September 16, 1838. Before ever he owned a locomotive, Hill walked across Minnesota on snowshoes; he had driven dog teams to Fort Garry and slept in the open of sub-Arctic Manitoba when it was Prince Rupert's Land.

Winter marked him, too. By the time he was forty, his massive shaggy head, his leathery face, his graying beard, and his immense shoulders reminded his friends of a rather grim old lion. What struck you, too, was his one good eye. It was as black as night, save when it seemed to glow from deep in his dark, weathered countenance like a live coal at the bottom of a cinder pit.

So, in 1856, and not yet turned eighteen, young Hill quit, said goodbye to mother, brother, and sisters, and set forth with the idea of going to the Orient, preferably India. Instead, he went to Chicago, then on to the Mississippi and by river steamer to St. Paul, the rising new metropolis which only recently had ceased to call itself Pig's Eye. Here was the center of a sizeable trade in furs.

The Orient had suddenly receded, and Hill found himself in the unromantic mud of a jerry-built frontier city. St. Paul, the capital of Minnesota Territory, was then in its first great boom. The flush times were to continue for a little more than twelve months longer, or until the

Tall-stacked 105, built by Rogers for the old Eastern Minnesota, another predecessor of the "Big G."

Panic of '57 transformed the city, as a local historian described it, into a "place of no money, no values, no property . . . and no foundation to build on."

Twelve months of flush times, so it turned out, was all that Jim Hill needed to get set. In that brief period his energy put down firm root in the community; St. Paul was to be his base of operations for the next six decades.

WITHIN TWELVE HOURS after young Hill first saw the levee, he had a job as clerk for J. W. Bass & Company, agents for the Dubuque & St. Paul Packet Company's line of river steamboats. It was his duty to check incoming and outgoing freight. He handled the waybills. He kept an eye on the warehouse. He kept the time of the roustabouts; and if need be, in an emergency, he was expected to pitch in and work like any dock walloper. It was no exalted job.

When Bass & Company sold out to another firm, Hill went with the trade. By then he was virtually running the business anyway. One is inclined to agree with Hill's official biographer that his subject did not wait for opportunities, "he made them," for Hill was ambitious.

The Civil war caused little change in his life, and though he did try to enlist, his one eye was considered too great a disability, which goes to show the lack of imagination of the recruiting officers.

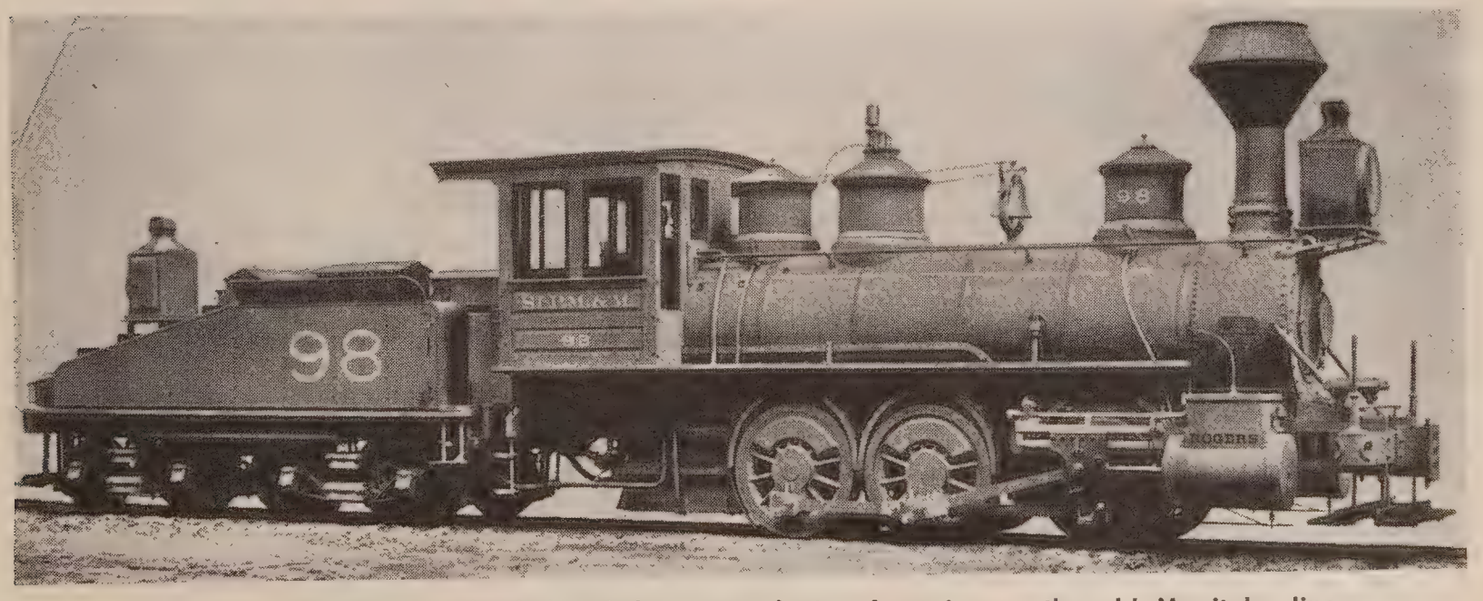
Within a year after war's end, Hill became agent for the new and tiny, yet grandiosely named, St. Paul & Pacific Railroad Company, whose doubtful tracks ran between the St. Paul levee and the twin towns of St. Anthony-Minneapolis, ten miles distant. Hill promptly built a new warehouse next to the railroad depot, with its lower floor on a level with both the car tracks and the docks. This eliminated the cost of drayage from dock to rail, and permitted the struggling railroad to handle freight more cheaply than the teams which had been undercutting the St. Paul & Pacific.

Noting that the line had trouble getting fuel, Hill proposed that he supply its hungry locomotives. After that, the road never lacked for wood. But Hill considered wood a very poor fuel. Coal was what a railroad should have. He had, meanwhile, made a survey of all available sources of coal, and presently he leased deposits in Iowa, which in time grew to 2,300 acres. He brought in a shipment, and the St. Paul & Pacific discovered coal was, indeed, much superior to wood.

And now, taking Chauncey Griggs as partner, he organized, Hill, Griggs & Company. For the next several years this outfit operated a fuel, freighting, merchandising, and warehouse business. It also held what was virtually a monopoly of the coal business in St. Paul and the region roundabout.

By heroic efforts, the St. Paul & Pacific had pushed its rails north and west from Minneapolis to St. Cloud. From there a stage and freighting line carried passengers and goods to Fort Ambercrombie or some other landing on the Red River, where they were put aboard one of the Hudson's Bay Company steamers for the down-river run to Fort Garry. Hill had first call on the railroad, and his route by rail and team to the Red River was infinitely quicker than the oxcarts.

During its first season, with Hill in partnership with Norman W. Kittson, also Canadian-born, the Red River Transportation Company returned a net profit of 80 per cent. But Hill was not content. His close association with the St. Paul & Pacific Railroad had brought him to the belief that rail lines, rather than steamboats, would dominate traffic in the Northwest. He knew well enough that the St. Paul & Pacific was jerry-built and jerry-managed. It was undependable, even



This sturdy Rogers six-wheeled switcher saw plenty of service on the old Manitoba line.

Archie F. Carlson

Great Northern engine No. 24, shown at Willmar, Minn., hauled train-load of Spanish-American War volunteers to camp on July 6, 1898.

with good luck. Yet sometime in 1872 he remarked of it that "The line could make money if there was somebody to manage it."

ANOTHER Minnesota road, the Northern Pacific, had been chartered to build from the shore of Lake Superior west to Puget Sound. This was to be a transcontinental after the style of the Union Pacific, complete with land grant. By 1873, this road had laid track from Duluth westward to the Red River by way of Brainerd.

Meanwhile, the St. Paul & Pacific had extended its original ten miles between Minneapolis and St. Paul by a line to Sauk Rapids on the Mississippi, another to Breckenridge on the Red River. And by 1873, too, the Northern Pacific had, through dizzy financial and legal methods, obtained a control of stock in a portion of the other line which was thereupon separately organized as the First Division Company, a rather dubious outfit.

The exact relations of these three entities need not be gone into exhaustively. Sufficient to know that the trickery was devised and put through for the sole benefit of the Northern Pacific by giving that line access to St. Paul, and also to the Red River Valley.

Now, in 1873, came another country-wide panic. Within forty-eight hours railroad construction ceased—not only on the Northern Pacific, but on roads in California, Texas, Iowa, and Maine. Sawmills ground to a halt in Michigan. Blast furnaces along the Monongahela were banked. All over the country, thousands stood in line to stare numbly at the closed doors of empty banks and trust companies. The whole great bubble of expansion and inflation was coming down in water!

Jim Hill watched with great interest the almost complete demoralization, while both the Northern Pacific and the St. Paul & Pacific went bankrupt. He was pleased to note that when the latter road defaulted on its bonds, the subsequent foreclosure sale extinguished the right of the NP to those tricky shares in the smaller line on which it had relied for entry to St. Paul. This, apparently, was the moment he had been waiting for a long time.

Until James J. Hill and associates laid sure and steady hands on it, the St. Paul & Pacific railroad had known a currently fantastic present and an increasingly tragic past, but never anything that could be described as a future. Its founders, indeed, had not considered it a railroad at all, but a machine for making money.

It began in 1843 as the Minnesota & Northwestern Railroad, which obtained a charter and land grant from Congress. Eleven years later, after a receivership, its promoters mortgaged the railroad and its land grants to a group of Dutch capitalists who were given to understand that the St. Paul & Pacific was the way to immense fortune. The Dutch put $13,380,000 into the company, eight million of which was siphoned off by various devices, such as phoney construction jobs, and the road again went into the hands of a receiver.

This pathetic railroad could run trains, after a fashion, from St. Paul to Sauk Rapids, 76 miles; and from Minneapolis to Breckenridge, 207 miles. There was also the brief beginning of a branch at Brainerd. And there were snatches of unconnected track north and south of Glyndon.

The St. Paul & Pacific tracks were something to see—and to ride over. A civil engineer in its employ told Jim Hill there were fifteen distinct patterns of iron in use, most of it purchased in small lots at various times. Ties, bridge materials, and other property were scattered all along the right-of-way, and even along track already laid. Nobody seemed to know who owned them, and many a tie and

timber went to improve the fence or barn or house of some settler.

The rolling stock consisted of a few well-worn locomotives and a collection of well-battered passenger and freight cars. The schedule of trains was beyond knowing; trains came and went according to the weather, the business of the moment, and the whims of officials, roadmasters, construction crews, and even section gangs. Over the far portion of the Red River section of the road, where traffic was very light, all trains quit running in December and operation was not resumed until May.

THIS WAS the outfit that Jim Hill had said could make money if it had a manager. He repeated this statement to his friend, Norman Kittson. He had a notion, he said, that the poor Dutchmen who had put nearly $14,000,000 into the line, only to see the money dissipated and the company go into receivership, could be bought off for a comparative trifle.

Hill knew that the "trifle" was more money than he and Kittson could raise from their own resources. But there was Donald A. Smith, resident governor of the Hudson's Bay Company. Smith was beginning to take more than a little interest in the Canadian scheme for a transcontinental railway. On one of his trips to Montreal, Smith stopped over in St. Paul, and Hill went to work on him.

The Hudson's Bay man proved to be receptive. He took the matter up with his cousin, George Stephen, head of the Bank of Montreal. The banker made a personal inspection of the St. Paul road, liked it, and eventually agreed to supply the major portion of the capital that would buy the bonds of the forlorn Dutchmen.

In 1878 the sale was made; the properties and land grant agreement of the St. Paul & Pacific were taken over by the newly incorporated St. Paul, Minneapolis & Manitoba Railroad Company. The incorporators were George Stephen, Donald A. Smith, Norman W. Kittson, James J. Hill, and John S. Barnes, representing, after a fashion, the Dutchmen's firm.

In the fall of 1877, even while Hill and associates were still horse-trading with the Dutchmen, Hill and Kittson's Red River Transportation Company was happy to load a big stacked locomotive on a barge at Breckenridge, Minnesota, and lash her fast to their *SS Selkirk*. The barge and the boat were then decorated with flags and a big banner with the letters *C. P. R.*, and started downstream, passing Fort Pembina to a salute of American artillery. At Winnipeg it was greeted with whistles, bells, banners, and bunting, plus a special edition of the Manitoba *Free Press*.

It is worth knowing that this first locomotive in Manitoba had come from the Baldwin works in Philadelphia, and was christened the *Countess of Dufferin*, in honor of the wife of Canada's Governor General. Meanwhile, the Countess herself drove the first spike in the railway. Little more than a year later, this branch of the Canadian Pacific reached the border, where Mary Sullivan, described as the big, strong, buxom daughter of the section boss, drove "the last spike home with one mighty blow amidst the loud cheers of the multitude."

Signing the agreement between the bondholders and Hill and his three associates did not mean that the property had actually been transferred. The transfer awaited court action. But large portions of the land grant, which Hill had figured would eventually pay the Dutchmen for the bonds, and much more, would not wait for court action or anything else. Dates on the calendar of 1878 governed expiration of the grants. The stipulations provided that on or before August 1 the rails of the St. Paul

(Continued on page 52)

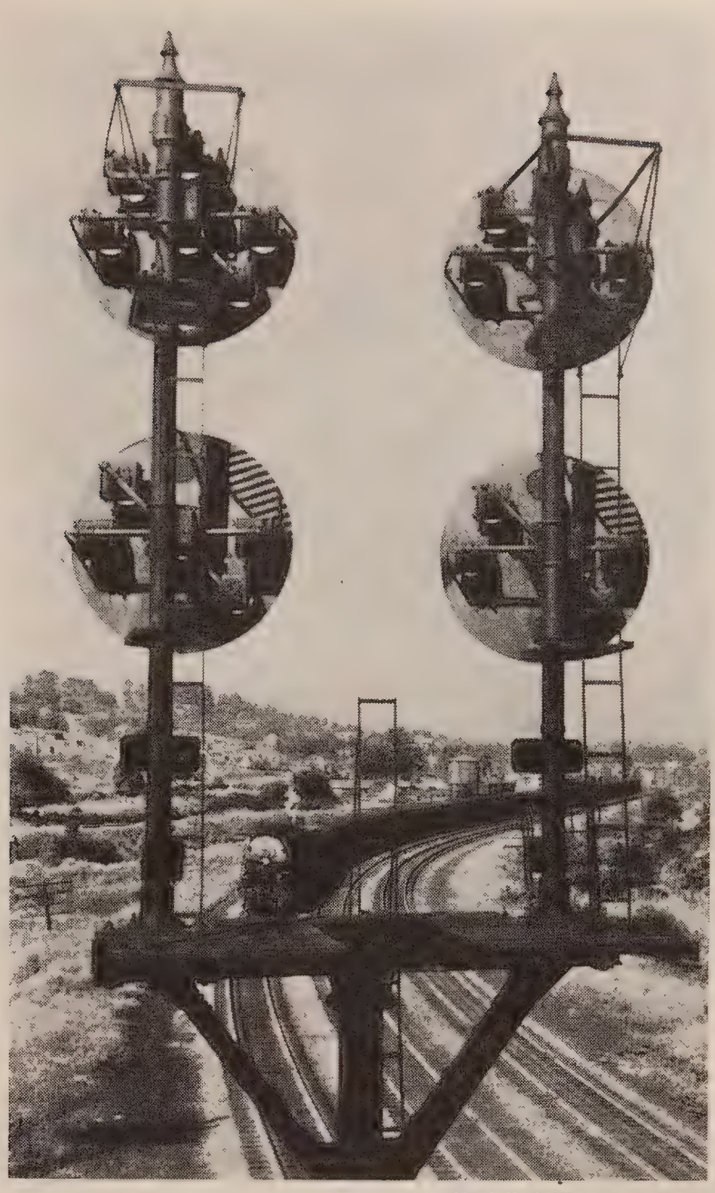
Mary T. Mehegan, waitress at Hill's boarding house, became his wife. The marriage was a very happy and fruitful one.

Herman Rinke

More monuments have been erected to Hill than to any other railroad man. This one stands in front of Superior, Wis., high school.

C. Norman Beasley, Louisville & Nashville Railroad

New $15,000,000 Radnor Yards at Nashville, Tenn., operated jointly by the Louisville & Nashville and the Nashville, Chattanooga & St. Louis, speed freight and save money.



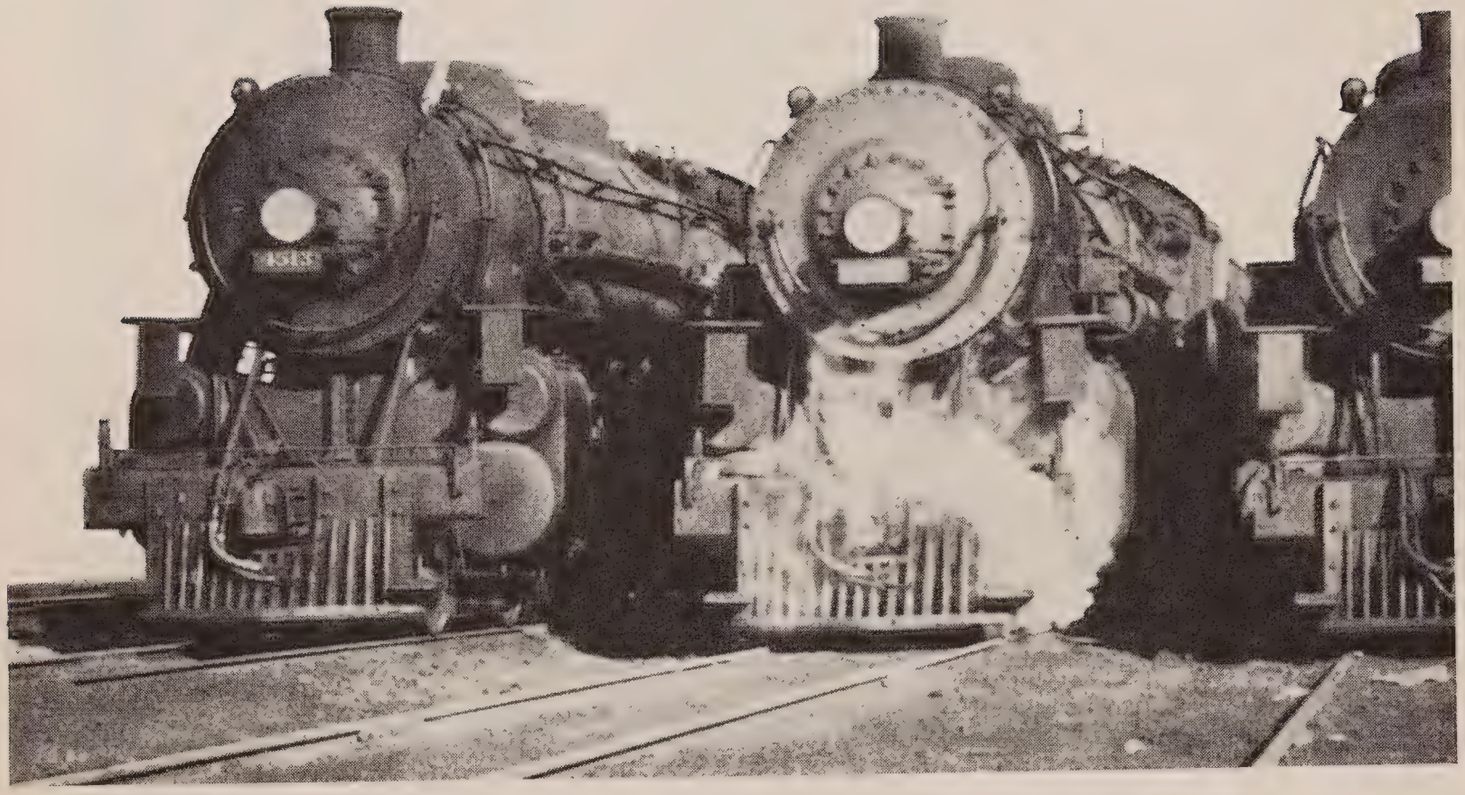
Norfolk & Western steam power wheels long lines of loaded coal cars from mine to market.

Norfolk & Western Railway

Patterns of a great industry

Ed Nowak, New York Central Railroad

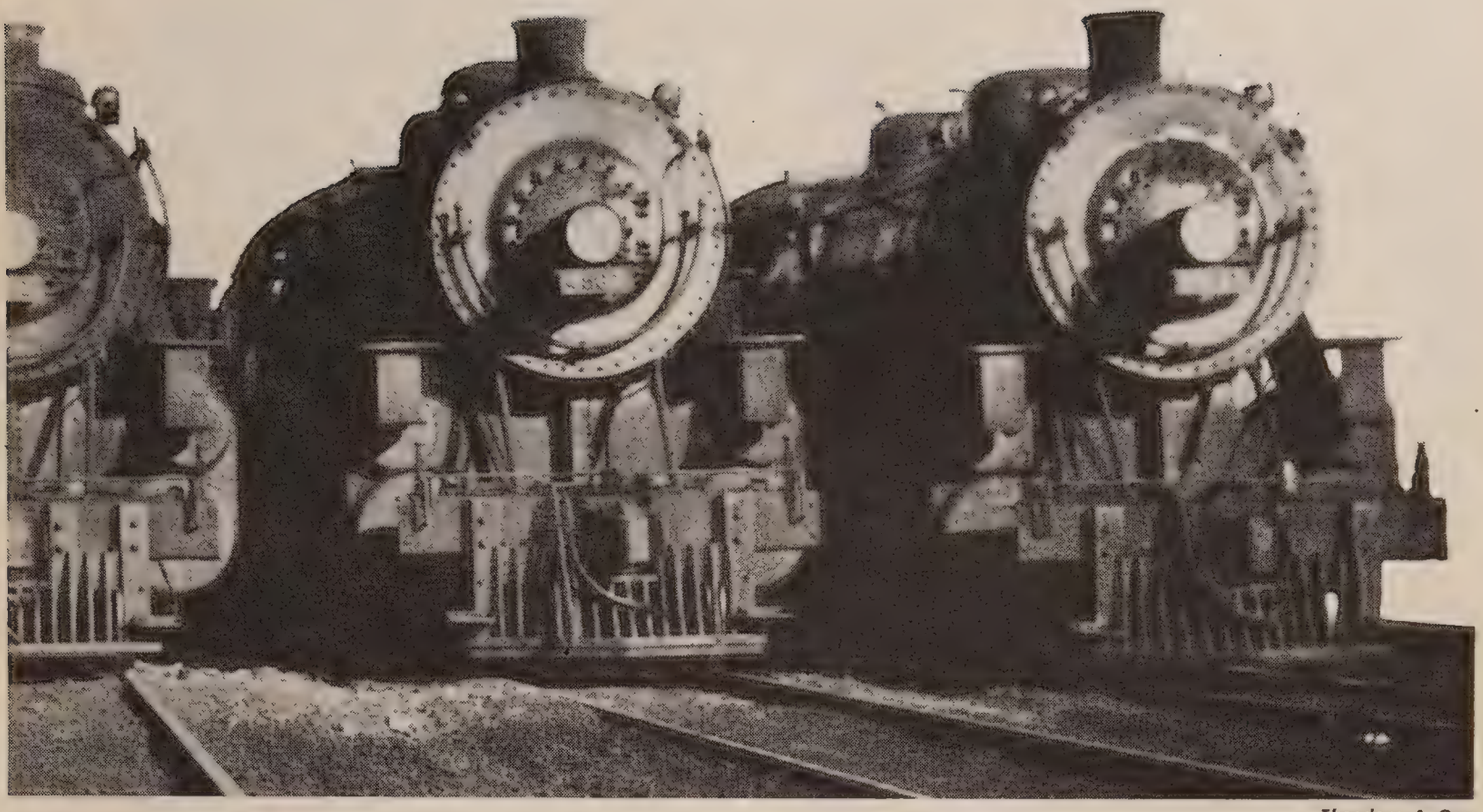
New York Central gandy dancers homeward bound at the end of a day.



A line-up you'll never see again on the West Shore Railroad (New York Central):

Donald Duke

No. 18, before being replaced by a diesel locomotive on the Southern Pacific's narrow-gage division, once the Carson & Colorado, takes her last long drink.

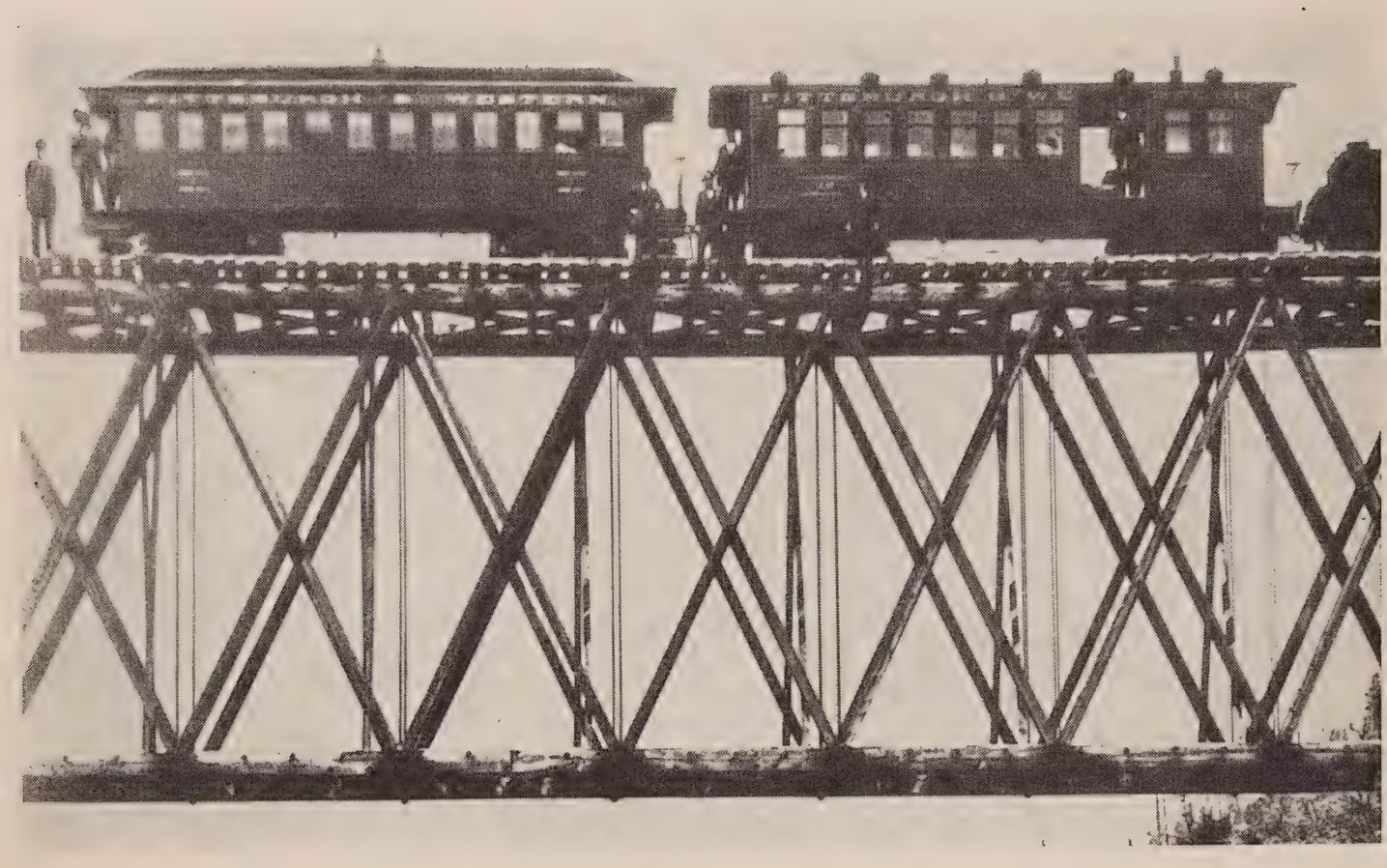


engines 4513, 4568, 4525, 4561, and 4527 at Dumont, N. Y., on December 13, 1936.

Theodore A. Gay

Double pattern: the signal bridge with its long row of semaphores stands on sentinel duty above the criss-crossing maze of gleaming tracks at Boston, Mass.

Ed Nowak, New York Central System



Silhouette of yesteryear: Pittsburgh & Western (now B&O) train with

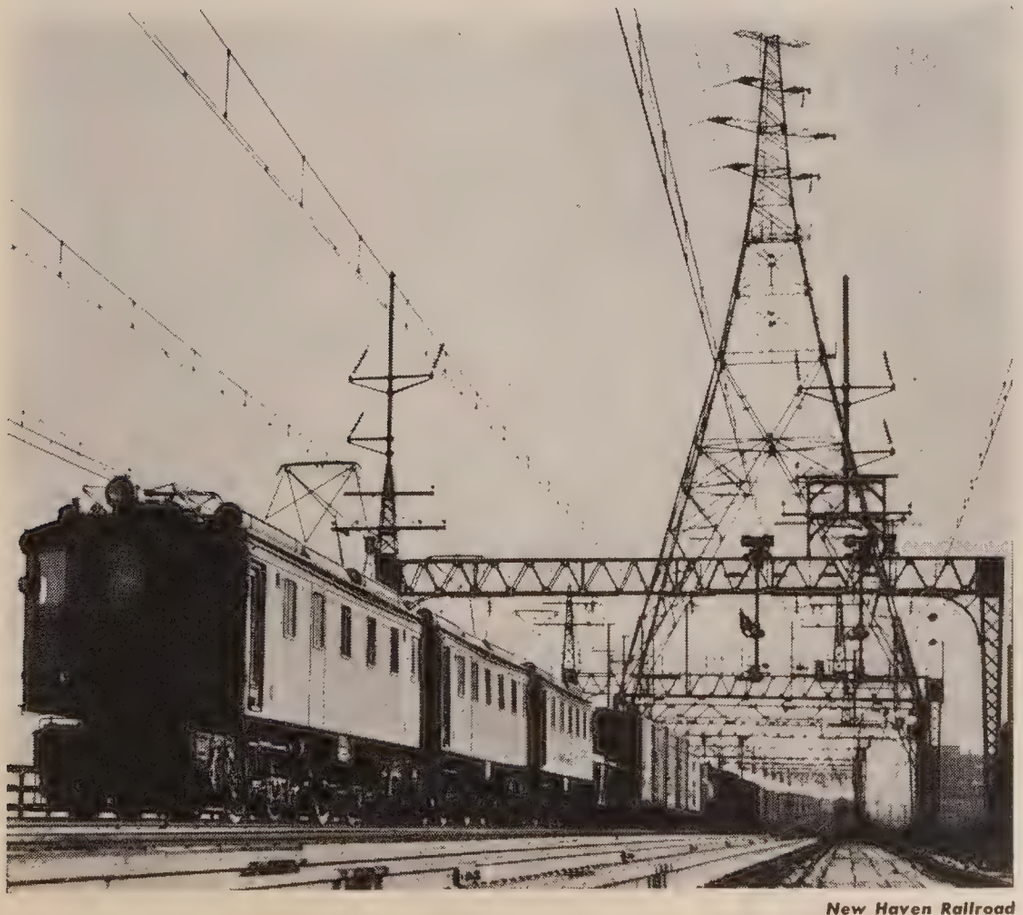
Ed Nowak, New York Central

Batteries of color-light signals such as this line-up help to control traffic and safeguard trains on the New York Central's four-tracked main stem.

wooden, open-vestibuled, passenger cars.

New Haven Railroad

Modern design: the servicing of a diesel-electric freight locomotive in the busy New York, New Haven & Hartford railyard at Dover Street, Boston.



New Haven Railroad

Eastbound three-unit electric locomotive, the New Haven's 088, wheels a mile or so of manifest freight on shining rails beneath a razzle-dazzle of catenaries.

Far cry from early-day engines is Union Pacific's 4007, simple articulated (4-8-8-4) type, built by Alco in 1941, shown on Cheyenne, Wyo., turntable.

Union Pacific Railroad

Southern Pacific Railroad

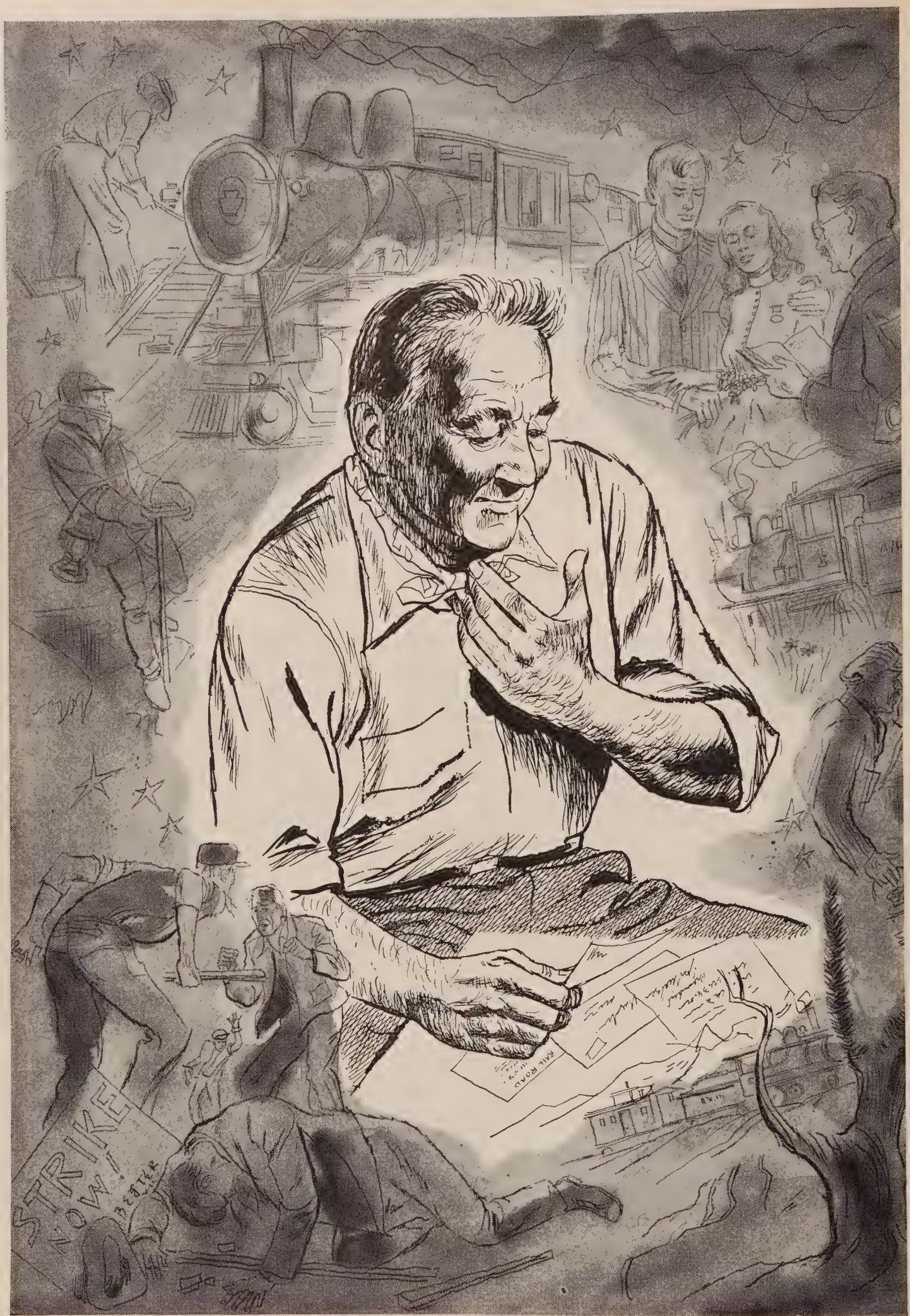
Tunnel with only one portal at Summit, Ore., in Cascade Mts. Southern Pacific locomotives enter this tunnel but never go through it. Track forms a wye, used in turning engines around.

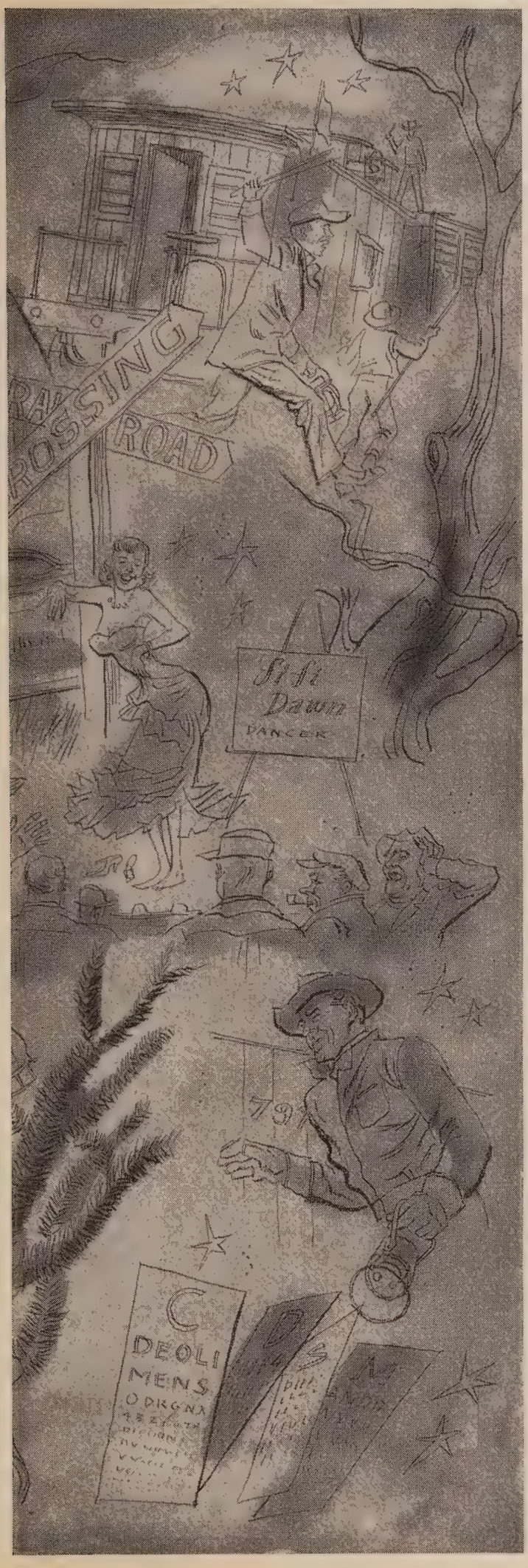
Standard Oil Co. (N.J.)

Facing the New London, Conn., submarine base, Engineer J. O. Menard runs rail-diesel passenger car on stretch of New Haven track once abandoned but now used again because of RDCs.

Western Maryland Railway

Vital to railroads that serve seaports are their dock facilities. Looking through a steel pattern, we catch a glimpse of Port Covington terminal of Western Maryland Railway at Baltimore, which includes four covered piers, an ore pier with new bulk cargo cranes and boxcar loader, a coal pier, and a grain elevator. Twenty ships could be loaded there at once.


STRIKE
NOW!



SERVICE LETTERS

They Bring Back Long-Forgotten Memories of Wild Prairie Winds, Rawhiding Freight Runs, and the Boomers I Knew

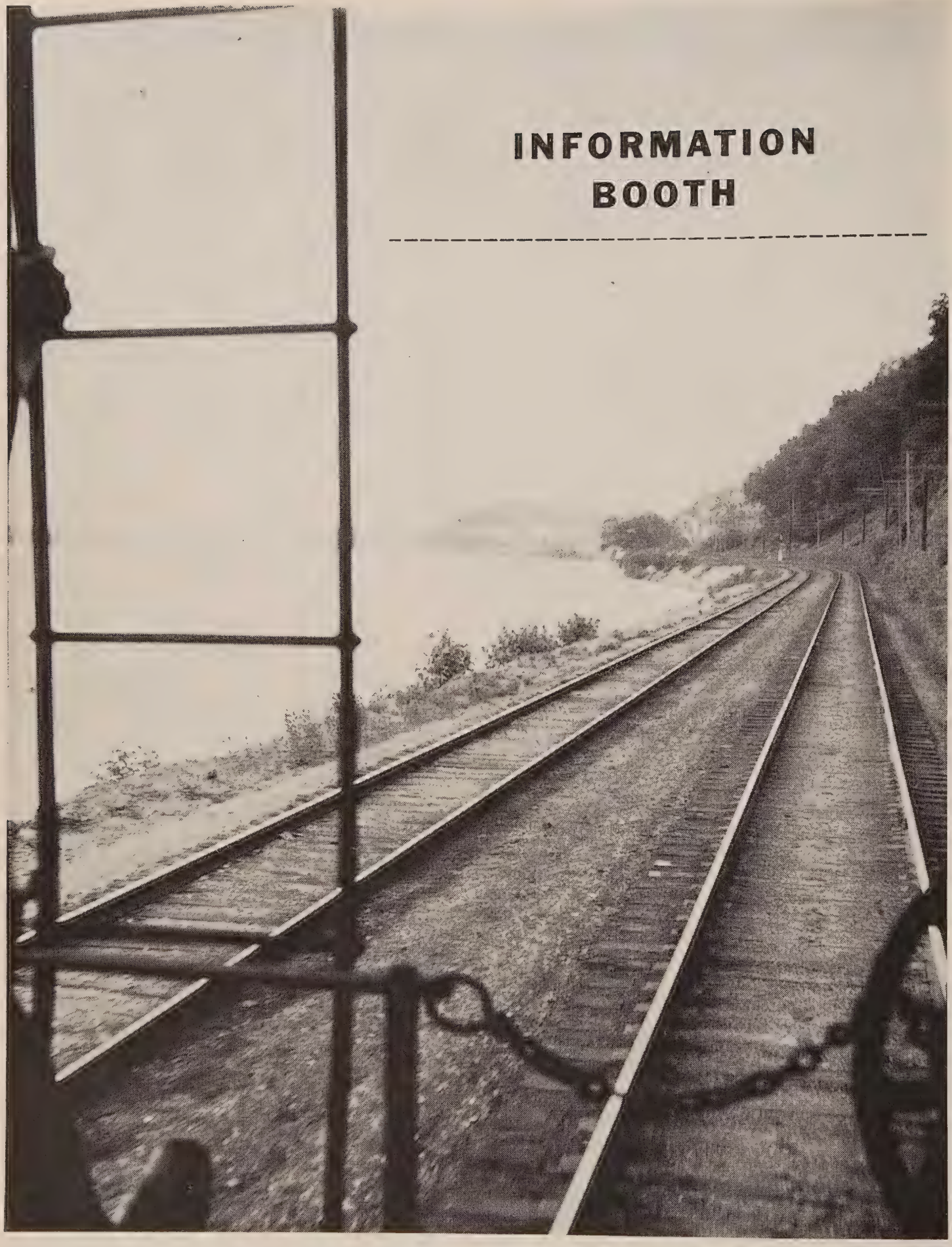
THE ECHOES of bygone days ring in my ears when, from the bottom of a battered storage trunk, I dig up a flat tin box, a box full of ancient papers and rich memories—insurance policies, some lapsed years ago, old contracts and agreements, birth records, and a marriage certificate.

I hold that last one for a while and I see the quaint, little brick courthouse, with the gracious trees and the shade-dappled lawns around it, and I hear again the voice of the country Justice as he read the wedding service from a well-worn book bound in black leather. The knot he tied that drowsy summer afternoon in the long ago has never loosened. The same girl bride, now matured, is still doubleheading with me. I mention this fact proudly

(Continued on page 55)

by HAYWIRE MAC

INFORMATION BOOTH



Illinois Central Magazine

Rear view of Illinois Central redball freight, CC-4, which races daily between Council Bluffs, Ia., and Chicago. Here it is at Dubuque, by the Mississippi River. Which reminds us we are planning a feature, "Railroading Along the Mississippi." Readers are invited to submit striking photos that show both river and railroad in the same shot.

ASK BARBARA: Railroad questions are answered here every month by our research expert — as many as space permits. Top priority is given to subjects that seem to be of wide general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York 17, N. Y. No replies will be sent by mail.

1

Question *How many trains travel the Pennsy's New York-Washington stretch?*

Answer This is one of the busiest railroad lines in the world. Although it is only 226 miles long, its four-lane speedway and adjoining passenger and station sidings include over 1,000 miles of track. On this run, which reaches three important metropolitan centers—New York, Philadelphia, and Washington—the Pennsy handles the heaviest passenger traffic in the country: 475 passenger and 120 freight trains every 24 hours. Motive power consists of electric GG-1 and P5a's, as well as steam locomotives, diesel electrics, and multiple-unit cars. Approximately 5,000 passenger cars and 15,000 freight cars travel the route.

2 *Is it true that moisture on the tracks increases the possibility of wheel slipping?*

Yes. The slipping is caused by an extremely thin, almost invisible layer of oil about one molecule thick, which spreads itself over the running band of a rail when rain starts or when there is dew. Despite its thinness, the "monomolecular layer" can withstand pressures so high (up to 75,000 pounds per square inch) that locomotive wheel loads ordinarily used will not break through it.

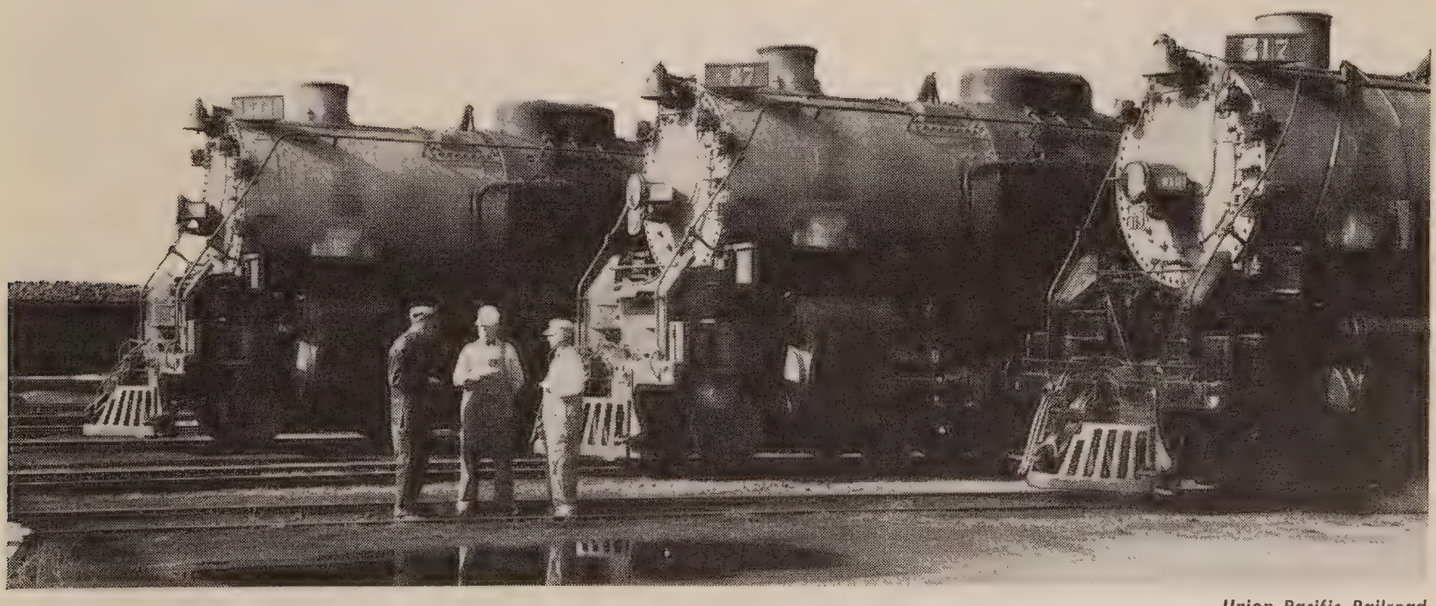
Often accumulations of journal oil can be observed outside the wear band. Journal oil used in the bearings of freight cars contains some percentage of animal oils which spread rapidly over a polished surface in the presence of a small amount of water. General Electric research laboratory technicians, studying the problem in the hope of finding a way of "washing" the rails, feel that if the source from which the film spreads is removed, the moisture will no longer cause slipping. Tests are being made to explore methods of cleansing. Experiments include the use of water, detergents, solvents, open flame, and ultra-violet light.

If any of these proves to be a suitable cleansing agent, it will eliminate much of the sand currently used on locomotives to improve traction on wet days and train operation will be smoother.

3 *What does "interlocking" mean?*

This is the system used to insure the safe handling of train movements at terminals, junction points, grade crossings, and drawbridges. The technical definition is: "An arrangement of signals and signal appliances so interconnected that their movements must succeed each other in proper sequence and for which interlocking rules are in effect. It may be operated manually or automatically." Interlocking includes mechanical, electro-mechanical, electric, automatic, or relay methods.

4 *Where can I find a jeweler who manufactures or handles railroad Broth-*



Union Pacific Railroad

In 1938 when steam still ruled the rails on the Union Pacific, these three engines, Nos. 809, 811, and 815, were lined up at Council Bluffs, Ia., while the hoggers talked things over.

J. C. Hammond

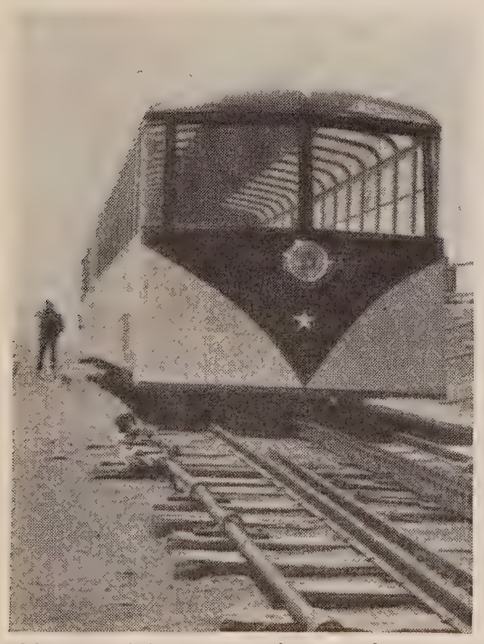
The only Budd car on the Southern Pacific, this recently acquired railiner replaces regular motive power on mid-day run between San Francisco and Sacramento.

erhood lodge pins, emblems, watch-chain charms, etc.?

Write to any of the Brotherhood magazines.

5 *What are the most modern and effective streetcar systems operating in Canada?*

Aside from interurbans, Canada has five streetcar systems left. The Toronto line would seem to offer the most extensive service, and has the most up-to-date equipment. The world's largest operator of PCC equipment, Toronto has a roster of over 700 of these streamlined, fast-moving cars. The Montreal System and the British Columbia Electric, with a limited number of PCC's, rely chiefly on older types.



Observation cars journeying up Pike's Peak are now pushed by diesels which give modern look to popular old run.

6 *Is it a foregone conclusian that a branch line will be abandoned or a run discontinued merely because a railroad files application to this effect with the ICC and/or the state commission?*

No. Public hearings are held on each case and the facts brought out in these hearings often result in the denial of a company's request to abandon a stretch of track or discontinue a run. Sometimes, after an application is denied, the road pulls off a local passenger train and substitutes a more economical railcar. If this were done more often, there might be fewer abandonments and the roads would stand a better chance of making now-unprofitable short passenger runs pay.

One such case came up recently when the California State Public Utilities Commission refused to let the Southern Pacific discontinue a mid-day run between San Francisco (Oakland) and Sacramento. The road then ordered an economical Budd Car for service on this stretch, the only such equipment the SP owns.

7 *Does the Pike's Peak Cog Railroad in Colorado use steam power?*

Not now. Two diesel locomotives recently replaced the steamers. They push the sightseeing cars up the steep mountain grade and precede them on the down trip.

8 *How can clubs get railroad films?*

The Association of American Railroads publishes a list of such reels and the names of companies and groups which release them. Many rail films are available on a loan basis to clubs and other groups free of charge. For detailed information, write the AAR, Transportation Building, Washington 6, D. C.

9 *Has the Chris Lavoo murder case of 1932 ever been solved?*

No, this case is still a mystery. Conductor Chris Lavoo, who had been in Missouri Pacific freight service for eighteen years, was shot and killed in the caboose of a train which was fighting its way through a winter blizzard near Horace, Kansas. Although investigators of the crime reported signs of struggle within the crummy, they were unable to find evidence leading to the identification of the murderer.

10 *What is a "washout"?*

It is a stop signal made, by day, by waving both arms and swinging them in a downward arc, and, by night, by swinging a lamp in a wide, low semi-circle across the tracks. *Washout* is an old boomer term.

11 *How did the New York Central's emblem originate?*

This familiar oval has been used on timetables, in advertisements, and on the sides of boxcars since 1893, when it was created by accident in a print shop.

At that time promotion folders were being prepared announcing the New York Central's service to the Chicago World's Fair. As one folder was about to go to press, a proofreader, who was also an illustrator, spotted a large blank space and sketched an oval, lettered with the road's name, to fill it. Later, a typesetter found that design while working on a timetable cover, and included it in the make-up. When company officials saw the timetable proofs, they at first ordered the oval removed, but later, struck by its effectiveness, decided to try it out. The oval has been the NYC's insigne ever since. Today the company's advertising department has 24 sizes of it available in printer's cuts.

12 *What happened to the Pennsy engine No. 460 that pulled the famous Lindbergh Special?*

The engine is still in service. Last summer she was one of the two E6 locomotives operating on the Pemberton-Camden line in New Jersey, hauling through cars to and from connections with steam trains to and from Philadelphia. Early in the fall, she was put in service on the Cape May branch between Cape May and Wildwood Junction, although Budd cars have since been assigned to the area. No. 460 won fame for her Lindbergh run in 1927 between Washington and New York, when she had the incredible assignment of racing aircraft.

When Charles A. Lindbergh returned

to America in June, 1927, after his solo Atlantic flight—the first such flight in history—he went to Washington where he was given a hero's welcome. Films were made of the wild celebration, and agencies distributing newsreels wanted to get the pictures to New York immediately for showing at Broadway theatres. Some chartered planes to deliver the precious films as quickly as possible. International Newsreel, however, arranged with the Pennsylvania Railroad to race its pictures to the big city aboard a special train.

The road's fastest engine, E6-class No. 460, was chosen for the run. Although the 4-4-2 was not particularly heavy or powerful, she had a record of reliable performance. At 12:14 p.m., on June 11th, the train left track 8 in Washington's Union Station, her crew ready for action. The engineer, a traveling engineer, the fireman, and a road foreman of engines manned the cab, and a crew was assigned to the darkroom studio, a special car in which films were to be developed by agency staff men during the trip.

The first 14.3 miles alone were traveled in thirteen minutes. At intervals, planes carrying film of rival newsreel agencies flew near the Lindbergh Special, but the engine roared along, undaunted, at an average speed of 85 mph. It covered the 216-mile stretch between Washington and Manhattan Transfer, N. J., in 175 minutes and rolled into Penn Station at 3:21 p.m. Fifteen minutes later, projectors began flashing pictures of the famous pilot on theatre screens—a full hour before similar films were brought in by air. Transportation from the airport was included in the airplane's time. Engine 460's run against such unusual odds is an exciting chapter in railroad history.

13 *Please print a photo of No. 470, Maine Central's last steamer.*

The excellent shot shown here of No. 470 was made by Maine Central's photo contest winner Samuel Vaughan, Pride's Crossing, Mass. Mr. Vaughan is a passenger sales representative with the New Haven. Some years ago his father fired Boston & Maine freight locomotives. The contest winner describes his camera as a Kodak Tourist II, equipped with a f4.5 lens. The picture, he says, was taken without the aid of a flash. He used Plus X film with a lens setting of f8 at 1/50 of a second.

The Maine Central sponsored the photo contest as part of the program set up for the 470's last run. On June

Don Wood, Rail Photo Service

Famous E6 engine No. 460, which hauled Lindbergh Special in 1927, is shown being serviced at Atlantic City. Still active, the locomotive has been operating on Pemberton-Camden line and on short hauls near Cape May, N. J.

13, 1954, a host of rail fans said goodbye to MC steam power days as the proud old Pacific wound up her career traveling the rails on a special round-trip between Portland and Bangor.

14 *I have heard that television may be used in railroad yard operations. What will be its function?*

Through the medium of television, it is possible for yard operators to watch freight car movements and general switching over a large area. Tests now being made by the Southern Pacific may prove the beginning of a new technical trend. The experimental equipment includes two cameras, one with wide lens and one with telescopic lens, mounted on a special structure above the general yardmaster's large-windowed tower, and also a television viewer installed at the desk of the terminal superintendent.

Through the viewer the superintendent or yardmaster can command a wide view of yard activities in an area where freight trains are made up. By pressing a button, a picture brought in from the telescopic lens gives the yardmaster a close-up of operations 2,000 feet away. He is thus able to spot obstructions, defects of cars, safety violations, and possible vandalism.

Tests show that five or six cameras in a permanent installation would cover a two-mile-long railyard from every angle. Cameras housed in all-weather boxes equipped with automatic temperature controls and windshield wipers, would be remotely controlled from a panel beside the 10-inch viewer. They could be maneuvered to swing from side to side or to focus on particular areas.

15 *I understand the Great Northern has rebuilt its dining cars on the* Cascadian. *What is the new plan?*

The conventional dining cars on GN trains 5 and 6, which operate daily in local service between Seattle and Spokane, Wash., have been converted into air-conditioned cafe-reserved-seat coaches. At the rear of each car is a carpeted area with individual revolving and reclining "Sleepy Hollow" seats, equipped with foam rubber cushions. Ahead is a four-table cafe section where light

Departure time for Maine Central's engine No. 470 is dramatically recorded in this picture taken by Samuel Vaughan, winner of company's photo contest, part of program for 470's last run, road's farewell to steam.

foods and beverages are served. Kitchens are located at the forward end of each car.

The extensive rebuilding of these cars included installation of new floor coverings, new roofing, double-paned fog-free windows, wide luggage racks, individual lighting arrangements, and washroom facilities. Propane gas is used for fuel.

Running Extra

OUR recent item on fog signals has evoked much comment. Some readers remind us that, aside from the use of fusees and flares which we mentioned, there are special fog signals in operation on railroads. Theodore J. Sommer, 30 Second St., Harrison, N. Y., writes that such signals are commonly used on British Railways, and cites at least one example on a U. S. railway. He says a fog installation was made on the Pennsylvania, south of Rahway, N. J., governing westward movements from the west end of track B to track 4. This type installation consists of a small, low metal box mounted on the outer ends of two adjacent ties. A narrow metal arm, projecting from the box, places a torpedo on the rail when the interlocking signal, with which the apparatus is connected, is at stop indication. In places where weather conditions warrant additional protection, this is the means of warning the engineer that the signal ahead is at stop.

T. P. Taylor, Gabriola, B. C., Canada, supports this statement in his description of the use of torpedoes on English lines. He writes that these fog signals are used in conjunction with semaphores which cannot always be seen in bad weather. In this case the torpedo, equipped with a lead strap bent around the head of the rail, explodes when the first wheel of the engine hits it. One such explosion indicates caution, adds Mr. Taylor, and two mean stop. Platelayers—known as sectionmen in the U. S. and Canada—are responsible for placing the torpedoes in position.

Another Canadian reader, P. Allen, 3 Turnberry Ave., Toronto, is a signal maintainer on Toronto's new subway system. He writes that before moving to the Dominion in 1948, he was a signal installer on the subways of Londone, England. He would like to correspond with subway workers in all parts of the world.

Our October issue carried a picture of a 4-4-0 engine No. 1728, sent in by Robert Guhr, who wanted it identified. James E. MacDonald, 48 Hanmer St., East Hartford 8, Conn., thinks the engine was one on the New Haven's Valley Branch, which operated passenger service from Hartford through Middletown to Saybrook, connecting there with the Shore Line for New London. Although this line still exists, it no longer offers passenger service except for occasional railfan trips.

A No. 1728 was assigned to this run, according to Mr. MacDonald, and the equipment shown in the photo—the baggage car and coaches—are of the same general line and type as those used.

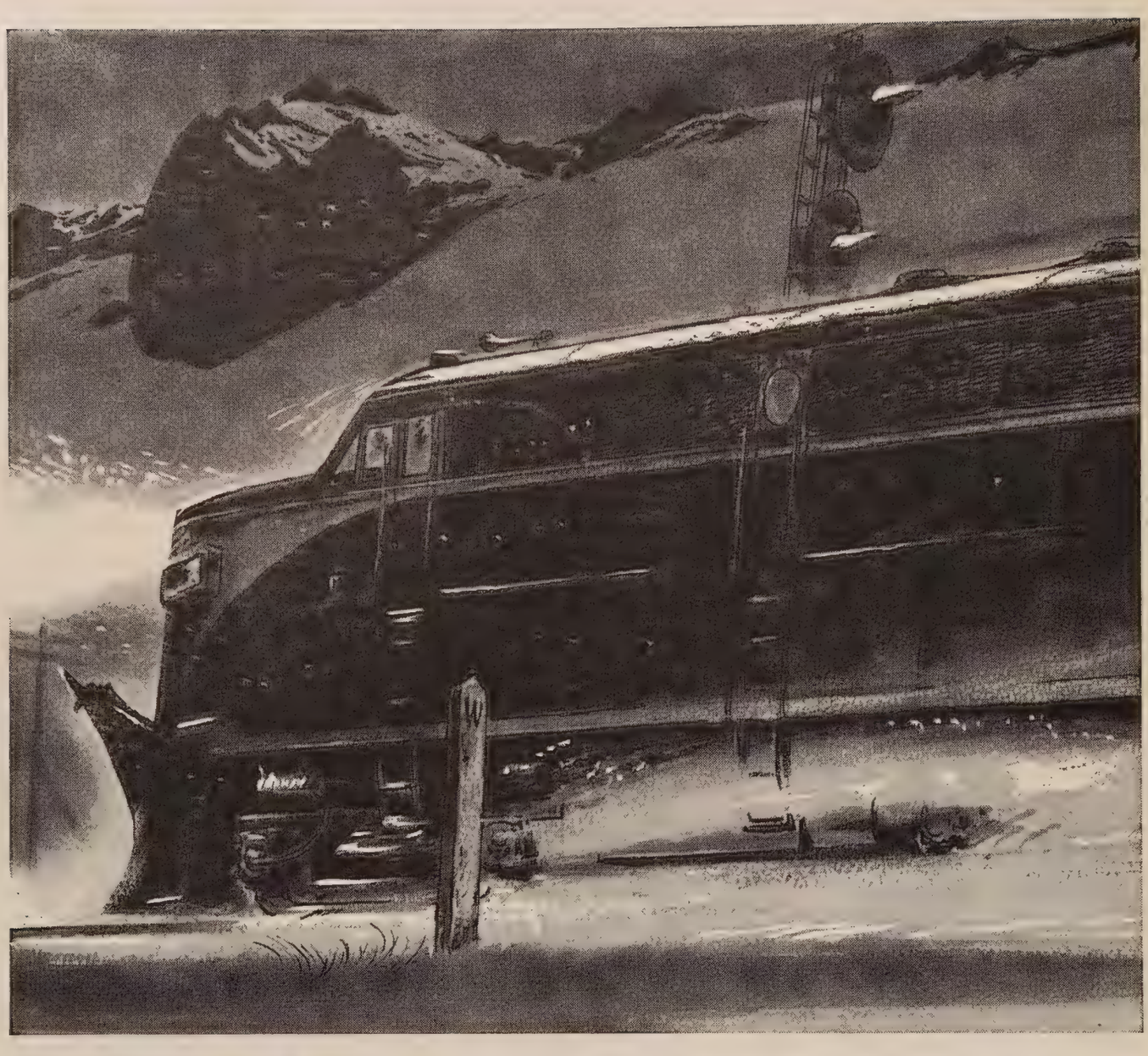
Jack Haggerty also picks the engine as a New Haven 4-4-0, adding that the road had a number of locomotives and cars like those in the 1900-1920 era.

In November we rashly stated that the only steam-powered train left on the Boston & Maine was one used on local commuter passenger service in and out of Boston. It isn't. The short-haul passenger service runs in that area are the only ones on the road not fully dieselized, and operations include a large number of steam-powered trains. Actually, about 75 steam locomotives are in active service, but restricted to commuter traffic. Our thanks to alert readers who spotted the error.

Richard M. Rogers, 6 Endicott St., Beverly, Mass., is anxious to obtain material, historical and anecdotal, on the development of railroads in New England, particularly in Massachusetts, New Hampshire and Vermont. He would like to hear from rail-history fans specializing in this subject. ●

Southern Pacific Railroad

Effectiveness of industrial television is being tested by Southern Pacific. The first installation of its kind, the TV device enables officials to observe yard operations which show clearly in the viewer.



Hank had tried to leap the gap between the units—a jump no man could make on such a night.

THE TRAVELING GRUNT

Some Guys Have a Jinx Riding Their Shoulder, Everyone Told Young Dulin. You Don't Have Just One Wreck, You Have Three, And You Got Another One Coming.

BUD SLATTERY was a pretty wild young hogger, but he was taking it easy with the derrick outfit coming back from the mess at Thicketty Fill. A good thing, too.

One morning they were sitting around the pot-bellied stove in the creaky caboose, not saying much, maybe because of what they'd seen when the derrick lifted the 4801 off her hogger, Sim Novak. There were four of them there in the caboose—Jud Madigan, for thirty years superintendent of the Two Rivers Division; Dave Hawkins, his gray ghost of a trainmaster; Jess Carter, too long a road foreman of engines to be anything else; and Hank Dulin, a good-looking youngster, six-foot-two, and clean as a new E-8—the sort of lad you'd invite home to dinner hoping he'd take a shine to your good-looking daughter. He was a brand-new college-trained special apprentice, newly

ILLUSTRATED BY HERB MOTT

by JACK McLARN

appointed assistant trainmaster. Maybe a little cocky, but that's about all.

At any rate, one minute they were just sitting there, and the next, the ancient crummy had slewed, upended, and piled everybody into a tangled heap against the front door. An ominous *whuff* of igniting oil from the broken caboose lamp touched off the splintered insides of the old car, and there was hell to pay.

When the engine crew got back to where the caboose lay, Jud Madigan, Dave Hawkins, and Jess Carter were lying side by side out of reach of the flames. The only staff man on his feet was Hank Dulin, his eyebrows burned off, his hair singed, and his coat smouldering, but he wasn't even breathing particularly heavily.

"Take it easy, cap," he said to the groggy superintendent, Jud Madigan. "I think you've broken a leg."

Tiny bubbles were forming on trainmaster Dave Hawkins' mouth, and Jud cursed bitterly, and glanced at Hank. The cocky look was still there, and something that might have been anticipation.

Bud Slattery, the hogger, came trotting up, panting.

"All right, Bud," Jud snapped, "what did it?"

"Funny thing, boss," Bud said, squatting beside him. "Looks like somebody left the single line layin' loose on the boom car 'thout windin' in the cable. Hook must've shimmied itself off the car, hooked into a bent under that little trestle, and jerked it right out from under ol' Bessie."

Jud Madigan stared at the wrecking crane, half submerged in the shallow creek and then at the burning caboose.

"Three days," Jud Madigan said, very quietly. "Two spills. And both freaks. First a culvert that's been covered up fifty years blows out from under the 4801 and kills Sim Novak, and now this blasted derrick—" He looked up at Hank. "And you never got a scratch."

Hank was obviously puzzled.

(Continued on page 70)

Ben F. Cutler, Rail Photo Service

Unlike some other large roads, Union Pacific refuses to commit itself to one type of power for all operating conditions. Here, the tradition-breaking X-56 roars out of a tunnel near Devil's Slide, Utah, in scenic Weber Canyon.

GAS-TURBINES ON THE CONTINENTAL DIVIDE

Designed Primarily for Freight Service, Turbines Average on Grades Four to Five Miles an Hour Better Than Diesels with the Same Load

by LESTER C. HARLOW

IN THE SUMMER of 1949 the hills and sagebrush of southern Wyoming reverberated for the first time with the thunder of a new type of locomotive—Union Pacific's pioneering gas-turbine—a development that may someday challenge the all-conquering diesel's uncontested supremacy on the American rails.

The crews who work on her call her the Big Blow, and she's the latest thing on wrought-steel wheels; yet strangely enough the turbine that is her heart was invented as long ago as 1791, when George Stephenson was just a pup, and railroads were scarcely dreamed of. The idea is simple enough. Oil is sprayed into combustion chamber filled with compressed air and burned. The resulting hot gases expand tremendously against rows of curved blades, causing the turbine drive shaft to spin. (When you hold a child's pinwheel against the exhaust pipe of an idling automobile, the same thing happens—the hot exhaust gases cause the wheel to rotate.) The revolving turbine then turns the generators which supply electricity to the traction motors geared to the locomotive wheels.

Application of the gas-turbine principle is neither new nor uncommon—the turbo-jet aircraft engine is its most familiar form, and diesel engines also embody it. The two locomotive types,

gas-turbine and diesel-electric, as a matter of fact, are remarkably similar, save for the prime mover of the electric generator, and the Big Blow's design includes as far as practicable diesel-electric trucks, traction motors, and controls. In contrast with the diesel, however, the air in the gas turbine is compressed and heated at a constant uniform rate without the use of any reciprocating parts or spurts of power.

The gas-turbine locomotive was developed as the result of efforts of engineers and scientists in both Europe and the United States. In 1941, Brown-Bovari built the world's first, a 2200 horsepower unit, resembling those used in stationary power installations, which, at last reports, was still in service. In the United States such concerns as Westinghouse and Allis Chalmers, profiting from new developments in jet aircraft engines, experimented successfully with them, but it remained for General Electric to produce the first, and so far, only model to be used in revenue service on an American railroad.

Since 1949 when that first experimental model took to the rails, Union Pacific has ordered twenty-five at a cost of $14,000,000. The first group, Nos. 51-60, is based on the original prototype, No. 50. The second group, Nos. 61-75, incorporates changes dictated by operating experience. This improved variety is 83 feet, 6 inches long, with a weight of 551,000 pounds distributed on eight pairs of 40-inch drivers, and is rated at 4500 horsepower, with a continuous tractive effort of 105,000 pounds, slightly better than UP's famous 3900 series, the *Challengers,* which the gas-turbine is currently displacing in the Ogden-Laramie territory.

This horsepower rating is based on an altitude of 1500 feet above sea level and an outside temperature of 80 degrees. As temperature and altitude decrease, however, power increases so that at 0 degrees the rating might be expected theoretically to rise to 5900 horsepower, though in practice these power increases do not occur in accordance with the predictions. Maximum speed is only 65 mph, but the Big Blow was designed, not for high-speed passenger service, but for heavy-duty freight service.

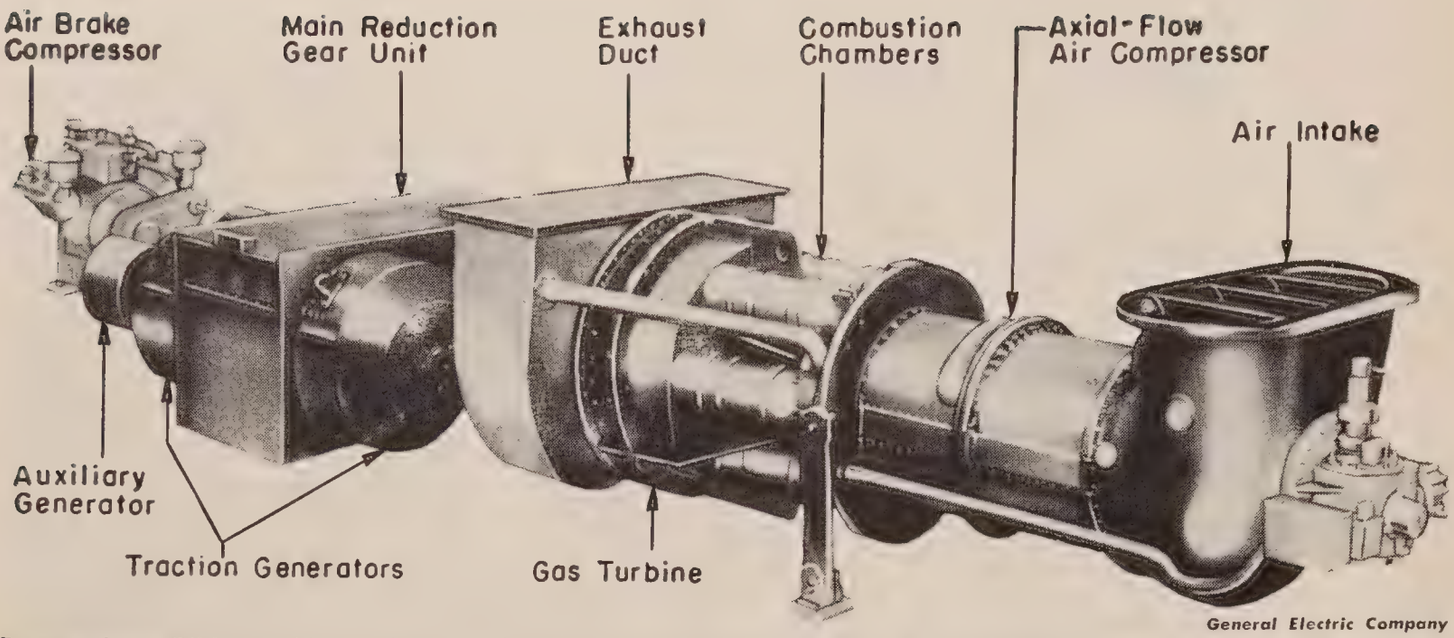
Besides the larger gas-turbine engine, each locomotive also contains a smaller 250 horsepower diesel. This is used to bring the gas-turbine up to a firing speed of 700 rpm, to run the auxiliaries—fans, pumps, and cooling motors—and to hostle the locomotive at speeds up to 25 miles an hour. Diesel fuel is used to start the turbine and to bring it up to 80 percent of its 6900 rpm maximum, at which time Bunker C fuel, the cheapest oil fuel available, is cut in. All these operations are made by controls in the cab.

During the past year, gas-turbine locomotives have actually moved Union Pacific freight at high average speeds and turned in more gross ton-miles per train-hour than either steam or diesel. The explanation lies partly in the ease with which the gas-turbine can be serviced—its fewer moving parts decrease maintenance time considerably—and partly in its superior ratio of weight to horsepower—it has the same horsepower as a 3-unit diesel, yet only two-thirds as much weight. On a mainline freight road like the UP, this is of no small importance.

Officials are quick to point out, however, that the gas-turbine locomotive is not being developed to supersede the diesel (after all the road was one of the first in the United States to recognize the value of diesel power), but to provide what it is hoped will be

Union Pacific Railroad

Gas-turbine design includes diesel-electric trucks, traction motors, and controls. Diesel crews have little trouble operating turbines. Here, a hogger reaches for the four-position turbine-control knob.



General Electric Company

Power plant. Oil burned in combustion chambers compresses air which then expands, spinning turbine, generator.

a better type of power for freight operations. Unlike other large Class I roads, UP is not willing to commit itself solely to one type of motive power for all operating conditions.

YOU HAVE TO SEE the Big Blow in operation—or any locomotive for that matter—to know what she's really like. This one is a real experience. Early one morning last June I rolled out of Rawlins, Wyoming, for Green River on No. X-57, one of Union Pacific's first group of gas-turbines.

Arriving at the yards a little after seven, I met X-57's engineer, Frank, and her fireman, Felix, and while we waited for the train to come in from Laramie they told me the X-57—Union Pacific mainline freights are all extras—would haul 91 cars, weighing a total of 4200 tons, straight through to Green River without stopping.

Shortly I heard a noise like the oil burner in my furnace at home, and what looked like a yellow diesel locomotive came down the mainline, its headlight burning bright. Frank told me later this was a safety feature required by the Union Pacific. It took me a moment to realize that this was what I had come for. The Big Blow. And I knew now why they called her that. She sounded the way the old steam locomotives did blowing down. No. 57 is still a quieter locomotive than her prototype, No. 50, the GE demonstration model. New methods of air compression and different filters made the difference.

The locomotive stopped near where we were standing, and the Laramie crew got off. Frank, Felix, and I got aboard. Inside, the cab looked so much like a diesel's that the average person wouldn't notice the difference. The latest in modern design, they said. Large rear-view mirrors on both sides of the cab save the engineer and fireman the trouble of sticking their heads out into the chilly Wyoming air to see the brakeman or the rear of the train. Besides this, the engine also has a speedometer, eye shades, individual adjustable padded seats, windshield wipers, and even a water cooler complete with individual drinking cups—a far cry from the days of the old wooden keg warmed by the sun.

While we waited for some papers, Felix led me through a door behind the fireman's seat into a narrow passageway for a quick tour of the engine compartment. The first thing I saw was the intake silencer near the roof where air drawn in from outside passes into a 15-wheel compressor rotor which builds it up to a great pressure.

"It was the intake and the compressor on the original model that made the noise you could hear for miles," Felix said. "You don't hear it now unless the air filters get dirty." Behind the compressor were six combustion chambers, fed by an oil pump which injects and atomizes the fuel through nozzles into compressed air.

"Spark plugs, like those on your car," Felix said, "fire the fuel in number one and six burners. The other four are fired by cross-fire tubes connecting them all together."

From the combustion chambers, the hot expanding gases go to a two-stage turbine at a temperature of 1300 degrees. The compressor and turbine are connected to a common shaft which, in turn, is directly connected to the generator. Beyond the generator is the auxiliary diesel. Then comes a control room containing relay panels, certain motors, and a flash steam generator.

"What do you use the steam for?" I inquired.

"Principally to heat the oil to the proper temperature and to clean out the oil filters. Not to heat a train. You won't see any steam hose on the rear."

As we came back into the cab, the brakeman was climbing aboard with some papers in his hand. The signal in front of us was showing a bright green. Frank released the brakes, eased open

the throttle, and we started to move. The start was smoother than many I have experienced on passenger trains.

As we made our way down the main, past the depot and through the cut west of town, the noise from the engine compartment increased. By this time the grade was beginning to make itself felt, and the engine seemed to "lay back her ears" for the heavy task ahead. The blowing noise increased. The time was 7:20 A.M., and Green River was 130 miles ahead.

"I've checked these turbines against diesels a number of times coming up the hill, and they average four to five miles per hour better for the same load," Frank told me.

The roar continued at a steady pace. But there was no vibration, not even as we climbed to Creston, 7104 feet above sea level, the top of the Continental Divide, the Backbone of America. There the strain eased off, and the roar diminished somewhat as we started down grade.

FOUR HOURS and ten minutes after leaving Rawlins, we rounded a curve and pulled into the Green River yards. Frank leaned forward, turned a knob which stopped the gas turbine, and the diesel auxiliary took over. If the turbine is to be idle more than half an hour, he told me, the turbine is shut down, just as, on the newer units, it is cut out on long descending grades. This is done to save fuel costs, which per gross ton-mile are no greater now for the gas-turbine than for diesels.

We were uncoupled from the train and moved slowly through the yard to the service area where men were waiting to get aboard for the necessary servicing. Here the locomotive would take on two kinds of fuel oil, lubricating oil, sand, and water, before setting off on another assignment.

I asked the roundhouse foreman how servicing of these turbines compared with steam.

"No comparison," he said. "With

(Continued on page 68)

Lester C. Harlow

Just in from Ogden, Utah, No. 60 takes on two kinds of fuel oil, lubricating oil, sand, and water at coal chute in Green River, Wyo. Auxiliary diesel engine brings turbine to firing speed, hostles locomotive in yard work.

Edwin H. Meyers

Three of the five cars owned and operated by Fort Dodge, Des Moines & Southern are shown at Boone, Ia., shops: Nos. 1 northbound and 2 southbound pass No. 62

The Last Interurbans

Once Boasting 250 Companies With 20,000 Miles of Track in U.S. and Canada, They Have Shrunk to 15 Companies and 900 Miles

by STEVE MAGUIRE

NEVER in the history of public transportation has a carrier risen to so great importance in so short a time and then declined—collapsed, even—so quickly and so spectacularly as did the electric interurban railway.

For a brief time, interurbans operated in every state of the Union except Arizona, Arkansas, Nevada, New Mexico, and the Dakotas. There were so many, in fact, that in some areas steam roads were threatened with extinction. In such states as Indiana and Ohio, for example, there was hardly a town with a population of 5,000 or more that wasn't served by a fast electric interurban. But those great days have gone, and today little more than a baker's dozen still remain on our whole continent.

Before 1898, when Charles L. Henry, sometimes called the Father of the Interurban, first coined the name, there were so few inter-city electric lines in existence and practices varied so widely that only in the light of what the interurbans subsequently became can we decide which line was the very first.

Among those frequently mentioned for this honor are Ohio's Akron, Bedford & Cleveland and New York's Buffalo & Niagara Falls route, both built in 1895. An earlier line, built in 1891 out of St. Louis to another community (probably Florissant), would seem to have priority, except that the second terminus was only a suburb

of St. Louis—not exactly interurban.

An Ohio line, the Sandusky, Milan & Norwalk Electric, which opened on July 18, 1893, and later became part of the Lake Shore Electric, is—it seems to us—the first line to embody those characteristics which later distinguished the true interurban. That is, a line connecting two localities at least ten miles apart, with an appreciable portion of its route on private right-of-way, over which electric cars operate at top speeds of more than forty miles an hour.

From the very start, the term *interurban* was misused. Short but ambitious trolley lines adopted the title in the hope of some day expanding to distant points. The 1.5-mile Valley City Street & Interurban Railway, which still operates as an electric freight road in North Dakota, and Reno's 3.3-mile Nevada Interurban are examples.

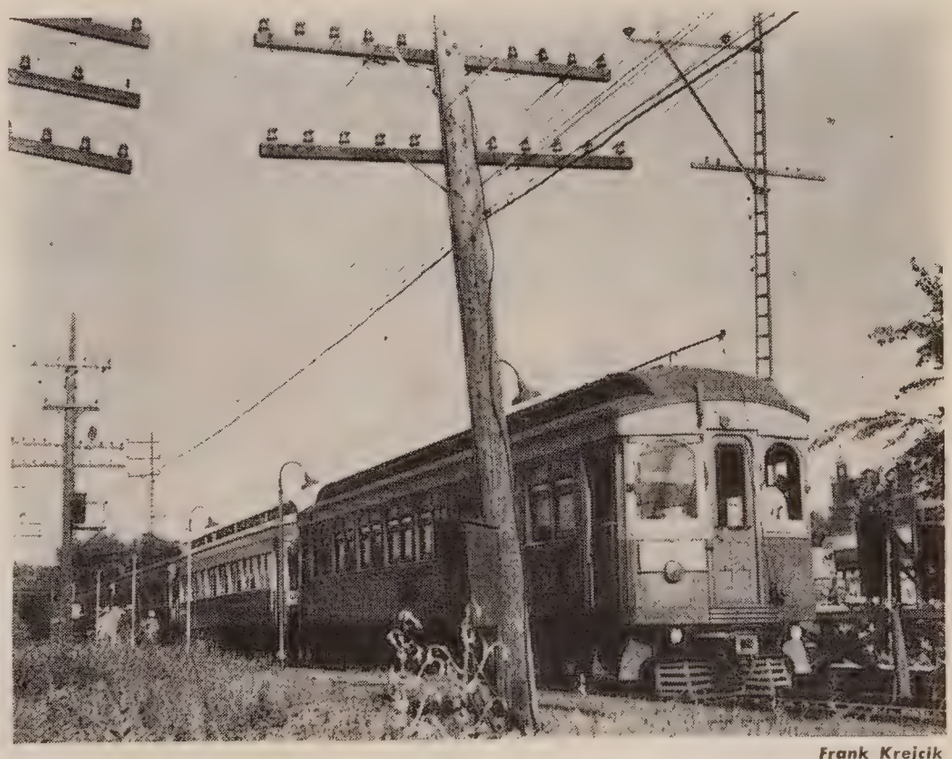
Even the usually reliable American Electric Railway Association got swept off its feet some years ago and classified a three-mile Maine horsecar line, the Fryeburg Horse Railroad, as an interurban. More recently Twin City Lines' five routes linking Minneapolis and St. Paul were commonly called interurbans, but—though they did run between cities—nobody could consider them long-distance fast lines.

After the early successes promoters dreamed of connecting all large cities with the fast electric cars. But many never saw the light of day, and many a short-lived interurban was built only to keep gullible stockholders on the hook long enough for the promoter to grab the first steam line out of town with the assets. Still others, built out of an honest impulse to public service, folded quickly because naive speculators had failed to consider whether or not a given area could yield enough freight or passenger traffic.

During those early years, the inter-

George Krambles

Northbound Waukegan local on the Chicago, North Shore & Milwaukee Railroad, headed by car No. 256, stops at Elm Street, Winnetka, Ill. This line handles large volume of commuter traffic.



Frank Krejcik

The Chicago, Aurora & Elgin, represented here with limited train of wooden cars, headed by No. 319, has now shrunk to 90 miles and is in serious danger of being scrapped.

R. D. Kimmel

Old Man Winter gave Des Moines a going over back in February, 1941. As soon as the snow stopped, car No. 52, a sturdy snow-scraper was put to work clearing off the snow-covered tracks.

George Krambles

Car No. 101 of the Waterloo, Cedar Falls & Northern crosses Cedar River bridge near Brandon, Ia. This former parlor car was rebuilt into the passenger-observation-baggage car shown here.

urbans developed at a fast pace. From 1910 until World War I, the heyday of the interurban, more than 250 companies operated nearly 20,000 miles of track in the United States and various parts of Canada.

MANY ELECTRIC LINES ran parallel to existing steam roads. Traction man Felix E. Reifschneider remembers that interurban contractors and promoters used to say: "Whenever you build an interurban between two cities already served by a steam road, railroad fares will drop from 10 to 25 percent, and you'll still get all their business."

In those days the steam roads were the interurbans' only real competition, and the interurbans often beat them, hands down, at their own game. Even the drummers, those fabulous traveling salesmen who spent so much time and money riding steam lines, preferred the cheaper interurbans on which you could save up to 50 cents on a single trip. In a day when 50 cents would buy a first-class, full-course meal—or beguile a farmer's romantic daughter—the interurbans were too good a thing to pass up.

They deserved their success. Their service was usually cheaper, cleaner, more frequent, and more convenient than their competitors'. In some cases they even opened up new territory and generated new business. By and large it paid off, for this type of interurban tended to outlast those which merely preyed upon paralleling steam lines.

By 1915 the interurbans had become so important that Samuel Insull, the electric power tycoon, bought the Chicago, North Shore & Milwaukee, probably because, with a cheap source of power already under his control, he thought he could get the edge on his competitors.

When Insull took over the line, it was in bad shape financially, and terminated at Evanston, a good distance from the heart of Chicago. Insull acquired trackage rights over elevated lines into downtown Chicago and bought new cars. Recognizing that he could not compete with steam roads for through traffic, he rejected the principle of parallel construction and, in 1923, built the Skokie Valley route at a cost of $21 million. This put the line solidly on its feet, and it remained so until the Depression.

About the same time, Insull also acquired the Chicago, Aurora & Elgin. For this, too, he bought new rolling stock, improved the roadbed, and advertised his line. Passenger traffic rose gratifyingly.

Then in 1925 he took over the Chicago, Lake Shore & South Bend, which he reorganized as the Chicago, South Shore & South Bend. Like the CNS&M, the new system also stopped short of downtown Chicago, transferring its passengers to the Illi-

nois Central at 63rd Street, Kensington station. But Insull had got into the Loop before, he could do it again.

When the Illinois Central electrified its suburban service at 1,500 volts, AC, Insull re-electrified his 6,000-volt AC line at 1,500 volts, DC, and finagled trackage rights over the IC into Chicago's Randolph Street terminal. With new cars and rehabilitated track and overhead, South Shore passenger business boomed; and the road has been a huge success ever since.

Insull also took on the always unprofitable Chicago & Interurban to Kankakee in lieu of payment of debts owed his power companies. Unlike his three other electric lines, the C&I ran through a rather sparsely settled area. For once Insull's Midas touch failed.

Putting his own men in charge of the company, he managed to recover the amount of the company's indebtedness, but that's about all, and when the Illinois Central electrified its nearly parallel line, Insull scrapped the C&I. That man knew his business. Of the handful of interurban lines operating today, three used to be Insull properties.

BY THE TIME Insull had rehabilitated the Chicago roads, most other interurbans, lacking the money to convert to rapid-transit service and combat growing highway competition, were beginning to sink into bankruptcy. But men devoted to electric traction continued their courageous attempts to improve them.

Charles T. DeHore, for instance, a young railway salesman for General Electric, decided to put into practice what he and his company had been preaching. He bought and began operating the run-down, bankrupt Cincinnati, Lawrenceburg & Aurora. With new lightweight cars, the line showed a measure of profit.

Encouraged by his apparent success, DeHore acquired the Indianapolis & Cincinnati Traction Company, reorganized it as the Indianapolis & Southeastern, and put into service thirteen of the swankiest lightweight interurban cars ever built. Finished in pastel shades, the cars had carpeted aisles, parlor-car seats, and all possible conveniences. DeHore was proud.

"We have done everything possible," he said in a 1928 magazine article, "to furnish the finest interurban service in the best cars. Now all we have to do is sit back and wait for the passenger traffic to develop."

DeHore had a long wait. Soon came the Depression. Traffic declined so badly that both the line and DeHore himself passed away shortly afterward, and his dreams with him.

William D. Middleton

Train leaves Montreal on the Montreal & Southern Counties line, owned by Canadian National. The cars, 621 and 623, were built for the Windsor, Essex & Lake Shore.

Steve Maguire

In the palmy days of the wooden interurbans, these Chicago, North Shore & Milwaukee cars lined up at the shops in Highwood, Ill.

Another traction man, Dr. Thomas Conway, went down to defeat just as DeHore had, after giving the world the fastest and best interurban service of his time. Though he rehabilitated the Aurora & Elgin and later created the Philadelphia & Western, a high-class electric line, Conway's crowning effort was the Cincinnati & Lake Erie.

Except in towns where street running held down their speed, the C&LE's 90-mile-an-hour cars could pull away from any automobile on the roads. They could do even better. In July, 1930, one of the high-speed cars kept pace with an airplane in a race staged for the benefit of Pathe News cameras and an astounded public.

But the Depression proved too much for this line also, and in 1938 the C&LE turned to buses. Conway's other line, the Philadelphia & Western, managed to survive the difficulties of the Thirties, probably because of the fast cars he had installed in 1931.

WITH the interurbans fading, some traction men believe that if steam roads had strung electric wires over their tracks and operated one- or two-car interurban trains on frequent service, parallel construction would have been discouraged, and electric interurban passenger trains might be running today. The Waterloo, Cedar Falls & Northern, once a steam line, tried it and is still running, though on a very slim schedule.

Other roads, however, found it didn't work. The 33-mile Texas Interurban between Dallas and Denton, probably the last interurban to be created, operated on a stretch of Missouri-Kansas-Texas track strung with overhead trolley wires. For seven years, beginning in October, 1924, lightweight cars ran sandwiched between steam trains. Then came the Depression, and the cars were sold to the Dallas streetcar system.

Those were the villains—the autos, the highways, the Depression. Curiously enough, both the auto and the interurban were developed during the same decade. But, while automotive transport grew slowly, the interurbans overnight flung a spidery network of tracks across the face of America. In their time, nothing could touch them. Speeds at 80 and 90 miles per hour were not uncommon, even before 1910. However, motors could not long withstand the shunting necessary to maintain top speed without burning out, so they were generally kept below 60 or 65.

The end of World War I and the recession which followed marked the beginning of the end for interurbans. As more and more highways were built and automotive speeds increased, the number of trucks, buses, and private automobiles doubled, tripled, quadrupled—and slowly both freight and passenger traffic took to the broad highway.

With the drop in traffic, one by one, the interurbans began closing down. Just as a generation before the interurbans had cut the ground from under steam railroads, so trucks, buses, and private autos now undercut the electric cars.

But the interurbans did not give up without a struggle. Those lines which could afford to modernize did so. Others, at long last, went after the freight traffic they had ignored for years. Though the sturdiest held on well into the Depression, for most the effort came too late. As hard times grew even harder, the interurban virtues of comfort, safety, and reliability lost their importance; and the cheaper bus and truck service captured whatever business there was, while privately owned automobiles dealt an even more crushing blow to the interurbans.

World War II brought a brief reprieve to the small group remaining. Some interurbans, ironically, began carrying the greatest passenger and freight loads in their history—but not for long. After the end of World War II, diesel locomotives operated the former steam railroads at unprecedented speeds, just as freeways and turnpikes were later to permit higher speeds to trucks and buses. The interurbans, once the speed kings of the world, could no longer compete. But by this time there were so few left that it didn't much matter.

W. H. Schmidt

The Waterloo, Cedar Falls & Northern's terminal in Cedar Rapids, Ia.

Despite depressions, recessions, highways, freeways, speedways, autos, buses, diesels, and trucks, nine American and six Canadian interurban companies have managed to stay in business—to some extent, at least.

Of these, three American and one Canadian line recently asked permission to quit. Most of the rest are

likely in the near future, to give up passenger service and become dieselized freight-haulers. Here is the roll-call of the last interurbans:

United States

Chicago, Aurora & Elgin (90 miles). This line now terminates at the Chicago Elevated, far short of downtown Chicago. Its operators want to sell it for scrap.

Fort Dodge, Des Moines & Southern (125 miles). Its two daily passenger trains are run primarily for the convenience of its employes. It should last a while longer but will almost certainly slump into a diesel freight road.

Chicago, North Shore & Milwaukee (265 miles). Shaky financially, the fast Shore Line may be abandoned, but the Skokie Valley route should last indefinitely.

Chicago, South Shore & South Bend (163 miles). This first-rate, high-speed line is in excellent condition and may well be the last interurban to operate.

Illinois Terminal (400 miles). A Class I railroad resembling old interurbans in places and in some equipment, this longest of all the surviving traction lines wants to abandon all passenger service except Granite City local trolleys and substitute diesels.

Metropolitan Coach Lines. A bus company, MCL will probably succeed in abandoning all rail passenger service on its five former *Pacific Electric* lines in the Los Angeles area. Only about 100 miles on the San Pedro, Long Beach, and Bellflower lines still retain interurban characteristics.

Philadelphia Suburban Transportation Company (70 miles). This route now retains only slight interurban appearance. The Philadelphia & Western, built to steam road plans, should last indefinitely.

Portland Traction Company (41 miles). A 14 percent drop in traffic during the past year, despite the acquisition of eight Pacific Electric cars, prompted the company to apply for abandonment of passenger service. Electric operation on this line appears to be doomed.

Waterloo, Cedar Falls & Northern (100 miles). Runs one round-trip daily, two on week-ends, over former steam railroad right-of-way. When present equipment wears out, not long hence, it is almost certain to go diesel freight.

Canada

Canadian National (Quebec Railway, Light & Power) (40 miles). Despite its remarkably old equipment, CNR may preserve this line indefinitely.

(Continued on page 64)

TRANSIT TOPICS

BY STEVE MAGUIRE

Steve

HORIZONTAL CONVEYOR BELTS will probably replace the shuttle trains linking Times Square in New York with Grand Central Station within two years if, as is anticipated, the Board of Estimate approves. Construction of the long-discussed $2,000,000 system is expected to begin before the end of the year.

According to the New York Transit Authority's general manager, Sidney H. Bingham, who pioneered the plan, passengers would begin their trip by walking onto a loading belt moving at a mile and a half an hour and into a series of small cars moving slowly but continuously at each terminus and accellerating to fifteen miles an hour

(Continued on page 61)

Steve Maguire

New York's Third Avenue El as seen from *Railroad Magazine* offices.

DOWNHILL AT NINETY

With Death at Their Shirt Tails, Those Washington Speedermen Joined the Birds

TRUE TALE
by
MAX C. KING

LOGGING RAILROADS in the twenties were notorious for boomer "rails," rough track, and heavy grades. I came across plenty of all three in 1927 when, during a slack period on the Northern Pacific, I was furloughed and ran a logging locomotive for the Northwest Lumber Company near Hoquiam, Washington.

The company had about eight miles of railroad and two locomotives—a Shay and a fifty-ton American saddle tank. There were four of us in the American's crew: Eddie Mitchell, head brakeman, the equivalent of conductor on a main line; Jack Anderson, second brakeman; Shorty Lamb, fireman; and myself, hogger. We made a pretty good team. The Shay switched out the logs for us, and we hauled them over the eight miles of track and dumped them on the unloading grounds near Boom Town where all the boom men, train crews, and section men lived.

I liked the town, though my wife, a city girl, burst into tears the first time she saw it and threatened to die of loneliness. We'd only been married six months then. It was, I guess, a fairly wild place. Bear and deer and other wild life would wander in out of the crab apple thickets to watch the puffing little engine, and in the fall the geese would migrate southward, sometimes skimming so low over the cabin roof you could practically reach up and touch them.

The town was located on Campbell's Slough, a backwater of the Humptulips River, at Gray's Harbor, and the houses were little more than shacks set upon pilings, under which the tide regularly moved in and out. Five hundred feet beyond the town, on a trestle over the slough, was the log dump, and the tracks cut back from it between the houses with little room to spare. The town kids usually played there on the track while we were up at Camp Fourteen, eight miles away. About a mile outside town, between Boom Town and the camp was Kline Hill. It had a three percent grade, so we had to double it with our normal twelve loads—six loads ahead of the engine and six loads behind.

One morning in November, on our first trip of the day, we had picked up our train at Camp Fourteen and were just about to pull out when the foreman told us Hank Baker, the speederman, was on his way up to the camp from town with a bunch of men, and we were to meet him at the switch at the top of Kline Hill.

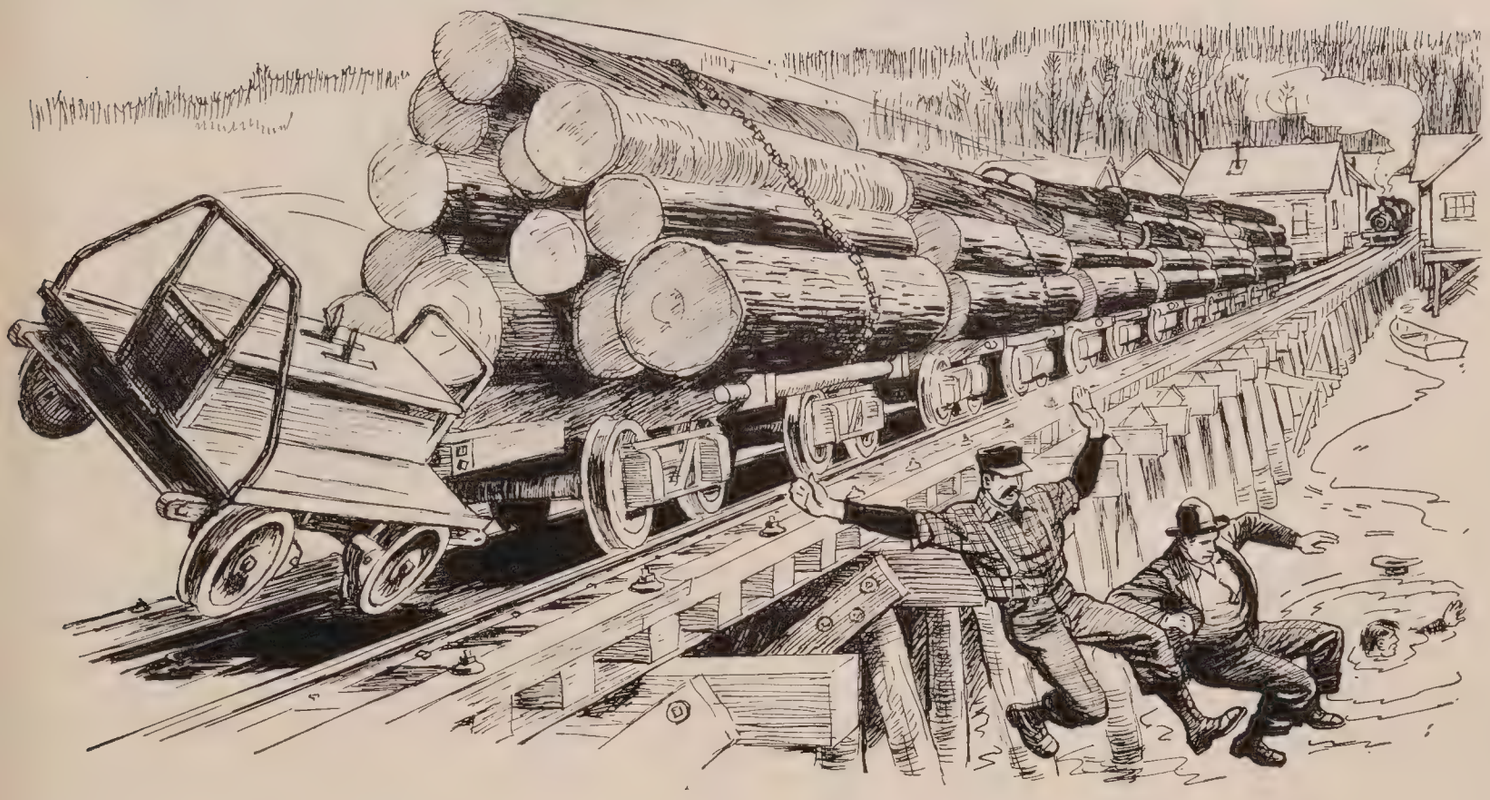
We got moving. Eddie Mitchell climbed aboard the front end of the forward load to ride—a practice not allowed on main lines—and we were off. At the foot of Kline Hill, Jack Anderson cut the rear six loads off on the fly, and I widened the throttle for the climb to the top. When we reached the summit, the speeder had not yet arrived, so Shorty set a hand brake in addition to the air. Jack cut us off, and we went back to pick up the rear portion of our train. It would take about twenty minutes, and by that time I expected the speeder would be waiting for us.

A while later, we again approached the top of the hill with our double, and I caught sight of our head end. Something was wrong. The cars seemed to be rapidly sinking into the ground. I realized then they were moving, back down the other side of the hill. The air brakes, which were in poor condition, had failed to hold, and now this tremendous avalanche of steel and wood was rushing madly down that three percent grade. What with the heavy timbers and sharp curves, the men on the speeder would never see them in time. I yelled to Jack to pull the pin on our rear cars and stay with them. The little engine, without her load, streaked ahead.

At the top, I saw the speeding cars careening around a curve to the right, picking up momentum at every turn of the wheels. Just as the cars disappeared from sight, I caught a fleeting glimpse of Eddie's feet sticking out between the cars. He was desperately winding hand brakes trying to bring the train to a stop. It was his responsibility, and, come what may, the plucky little brakeman was determined to ride those cars to the finish. To warn Hank Baker and the people of Boom Town of their impending danger, I blew a succession of screaming blasts from the whistle as we sped after the runaway train.

Shorty, our fireman, crawled out along the boiler to the front drawbar, so he'd be ready to couple on in case we overtook the flying cars. As it was, our engine was tossing so

MILES AN HOUR



violently from side to side that I expected we'd turn over any minute. But with the lives of those men on the speeder at stake, we only pushed her a little faster. Then, around a curve where the track straightened out on a tangent leading down toward town and the log dump, I caught a brief flash of the speeder in wild flight with the six runaway cars in hot pursuit. They must have been doing ninety.

I remembered then we'd left four empty log cars under the unloading pole at the log dump. Even if the speeder did outrun the cars, there'd be a crash, and a huge pile of old cables and bark, blocking the high side of the dump, would make it difficult to jump. Besides, there were the kids playing on the track. I blew my whistle frantically and prayed the Boom Town mothers would get their kids off in time.

Then the loads zoomed between the houses. A moment later a thunderous crash split the air, and a cloud of rusty dust rose above the log dump. Five hundred feet down the track, the loads, the speeder, and the empties slowed to a stop.

When I brought the engine to a halt, the only man in sight was Eddie, our brakeman. He waved toward the slough and yelled to us to grab pike poles to hold the men afloat until somebody could launch a boat. By now, all the women and children were out on the dump.

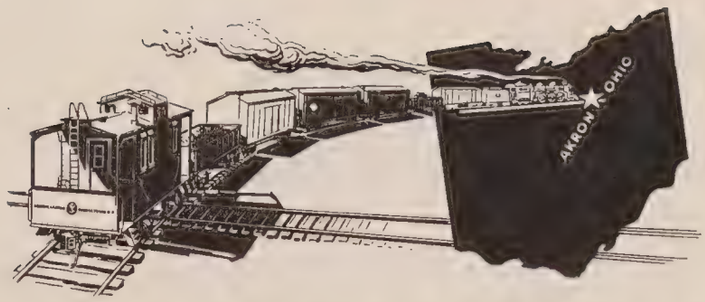
Suddenly a gasp of horror rippled through the crowd, and one man struggling in the murky water sank slowly beneath the debris. Instantly little Eddie Mitchell leaped in after him and disappeared. It seemed hours before he came to the surface again, but he did finally—with the drowning man safely in tow. The boat came up then and pulled the pair to safety.

When the last man had been fished from the icy waters, there was still one missing—a logger with a broken leg who had been returning to Camp Fourteen after two months in the hospital. One of the men from the speeder remembered how they had had to help the missing man aboard when the speeder left town for the camp. But nobody could remember having seen him when they started to run from the logging loads.

About half a mile out of town, we found him, sitting on a log, calmly puffing a cigarette.

"When I heard the whistle screeching," he told us, "I knew what to expect, and the instant those free-wheelers shot around the bend, I saw myself heading back to the hospital again or even to the undertaker's, so when Hank went into reverse, I unloaded this piece of concrete" — he grinned and tapped the cast on his leg—"and it took me right along with it."

Strangely enough, he hadn't been injured. That day the load ran away from us was certainly one of the most exciting of my life. ●

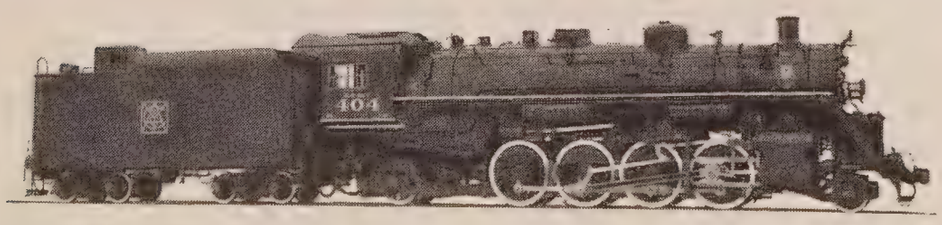


LOCOMOTIVES OF THE AKRON, CANTON & YOUNGSTOWN

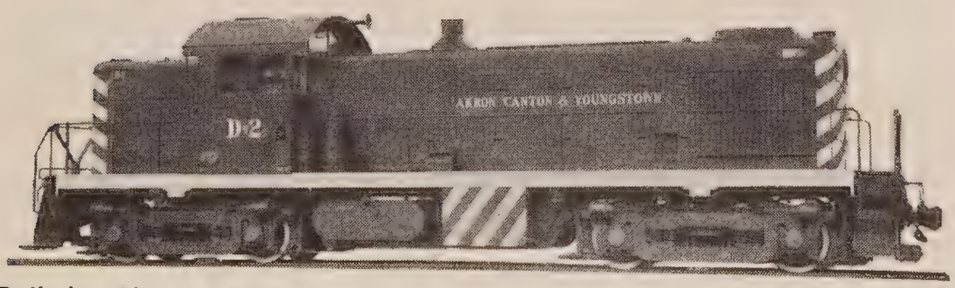
DIESEL-ELECTRIC

Number	Date	Class	Horse-power	Cylinders	Wheel Diameter	Engine Weight	Tractive Effort
101	1942	D	1000	6-12½x13	40	233,300	69,000
102	1945	D	1000	6-12½x13	40	240,880	72,000
200	1949	D-1	1500	8-8½x10	42	245,900	72,000
201	1951	D-1	1600	8-8½x10	42	250,500	72,000
202	1951	D-1	1600	8-8½x10	42	248,580	72,000
203	1951	D-1	1600	8-8½x10	42	250,620	72,000
204	1954	D-1	1600	8-8½x10	42	245,240	72,000
205	1954	D-1	1600	8-8½x10	42	244,580	72,000
206	1954	D-1	1600	8-8½x10	42	245,200	72,000
500	1948	D-2	2000	10-8½x10	42	255,600	75,000
501	1948	D-2	2000	10-8½x10	42	255,700	75,000
502	1948	D-2	2000	10-8½x10	42	255,560	75,000
503	1948	D-2	2000	10-8½x10	42	254,480	75,000
504	1951	D-2	2000	10-8½x10	42	252,580	75,000
505	1954	D-2	2000	10-8½x10	42	251,980	75,000
			STEAM (STORED SERVICEABLE)				
402	1928	2-8-2		26x30	63	313,800	54,600
403	1928	2-8-2		26x30	63	313,800	54,600

Locomotives 101-102 were built by Alco, 200-206, 500-505 by Fairbanks-Morse, and 402-403 by Lima. This roster was supplied us by H. L. Bullock, Superintendent, Motive Power, Akron, Canton & Youngstown Railroad.



Two Mikados, sisters to 404, are all that remain of steam on the AC&Y.



Built by Alco in 1945, No. 102 was the second diesel on AC&Y's roster.

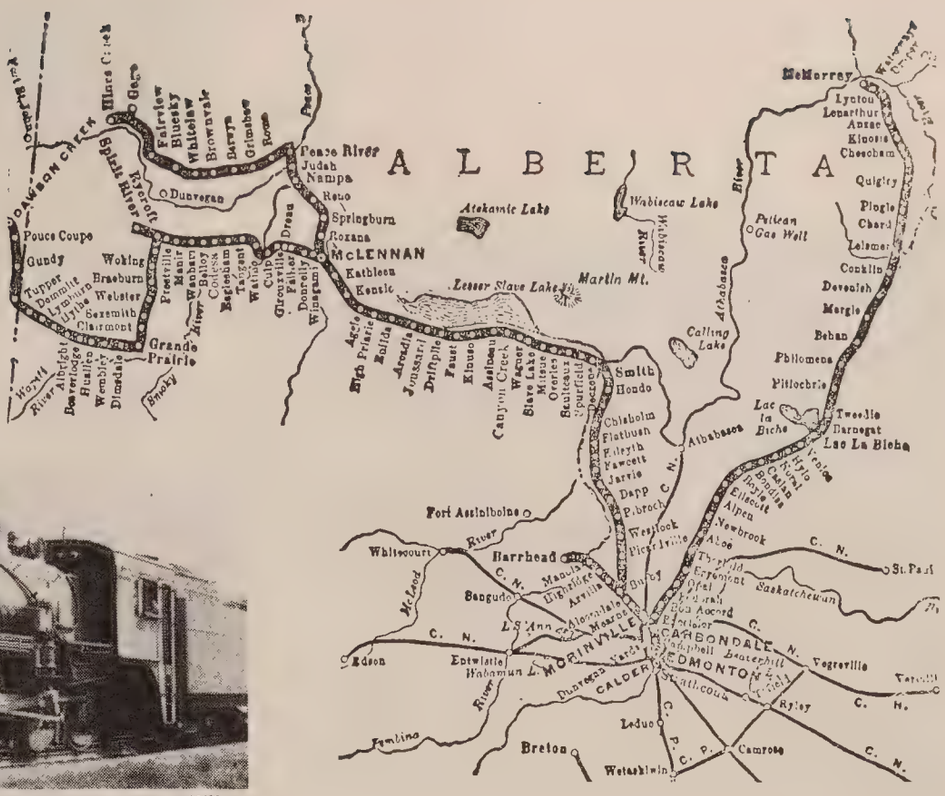
THE AKRON, CANTON & YOUNGSTOWN extends 171 miles across Northern Ohio from Mogadore west through Akron, the rubber capital of the world, to Delphos, Ohio. Along the way it makes connection with nine other roads at twenty-one junctions, a matter of no small importance on a predominantly freight road.

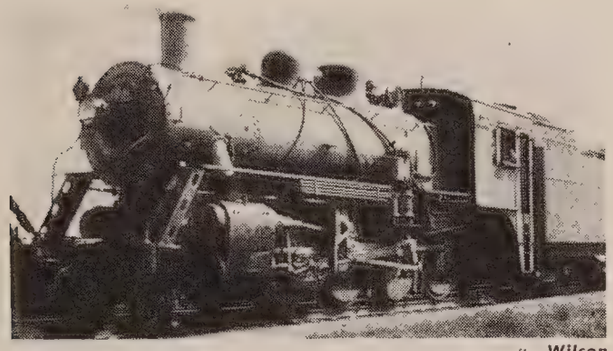
Although some of its business comes from the rural communities it serves, the main function of the line is that of a bridge route offering high-speed through-service without the delays which beset its competitors at the large cities through which they pass. Large cities the AC&Y just hasn't got. Medina, the largest town between terminals, has only 4359 inhabitants. Schedules are coordinated with connecting lines to keep things moving at a good clip. No wonder AC&Y has a reputation as a fast freight hauler.

Most of its trains are mixed, an increasingly rare occurrence these days, and a trip over the length of the line takes around eight hours. Once steam did the job, but AC&Y today has only two steamers left, and neither is in service. Stored serviceable, they are held ready in case of emergency. In their place, a fleet of fifteen diesel-electrics now hauls the road's heavy tonnages along its length.

Sleek-looking babies, these AC&Y diesels! Their roofs and skirts are painted in black duco, and across the bright yellow surfaces of their sides, hoods, and cabs, run the proud black letters of the road's name. ●

LOCOMOTIVES OF THE NORTHERN ALBERTA





A. Wilson

THE NORTHERN ALBERTA, owned equally by the Canadian National and Canadian Pacific, has 923 miles of main-line trackage and derives nearly all of its motive power from the two parent roads. This line is important because it serves North America's only known source of high-grade pitchblende ore, necessary for making plutonium-235. Details on this road may be found in a feature article, "The Northern Alberta Railway," by Richard L. Neuberger, in our January '54 issue.

Number	Builder	Date	Class	Cylinders	Drivers	Engine Weight	Tractive Effort	Grate Area	Boiler Pressure
71	CLCo[1]	1925	2-8-0	21x28	57	174,400	37%	33.65	200
72	CLCo	1927	2-8-0	22x28	57	193,500	39%	40.78	190
73	CLCo	1927	2-8-0	22x28	57	193,500	39%	40.78	190
74	CLCo	1927	2-8-0	22x28	57	193,500	39%	40.78	190
51	CLCo	1925	2-10-0	23½x28	57	217,200	45%	49.5	190
52	CLCo	1927	2-10-0	23½x28	57	221,740	47%	51.2	200
53	CLCo	1927	2-10-0	23½x28	57	221,740	47%	51.2	200
54	CLCo	1927	2-10-0	23½x28	57	221,740	47%	51.2	200
55	CLCo	1928	2-10-0	24x28	57	227,900	49%	56.2	200
56	CLCo	1928	2-10-0	24x28	57	227,900	49%	56.2	200
57	CLCo	1928	2-10-0	24x28	57	227,900	49%	56.2	200
58	CLCo	1928	2-10-0	24x28	57	227,900	49%	56.2	200
101	CLCo	1930	2-10-0	24x28	57	240,750	49%	56.2	200
102	CLCo	1930	2-10-0	24x28	57	240,750	49%	56.2	200
161[3]	MLW[2]	1909	4-6-2	20x28	70	241,000	34%	45.6	250

This roster was supplied us by A. Wotherspoon, Master Mechanic, Northern Alberta Railways.

All Northern Alberta Railways Locomotives have been converted to oil-burning.

[1]Canadian Locomotive Company. [2]Montreal Locomotive Works [3]Bought, 1947, from Canadian Pacific, which had numbered her 2563.

Addison Lake

Northern Alberta No. 27 (shown here) has been scrapped; No. 74 (small photo) is still in service.

Plywood

EMPIRE ROUTE

REMOTE-CONTROL CABINET

by PAUL N. WHITE

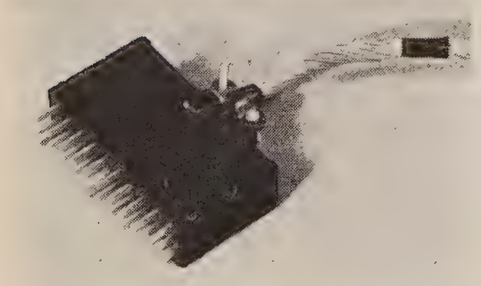
Santa Fe Railroad

Radios in Santa Fe locos now operate switches by remote control. L. E. Payne does it by hand.

FOR RAILROADERS who really like to "armchair" it when running a model layout, the remote control cabinet which operates the railroad by means of a 33 multi-wire control cable is the answer to a modeler's prayer. Placed anywhere in the vicinity of the layout, it'll send your trains rolling at the twist of a wrist.

You'll need the following items to construct this project—although they're useful when you want to know exactly how much power you're getting to the locos, the amount of current, and so on, ammeter, voltmeter are optional:

- 3 Terminal strips, 10 terminal
- 1 Power Pack, 12 volts D.C., about 4 amps.
- 1 D.C. Ammeter, 0 to 5 amps.
- 1 D.C. Voltmeter, 0 to 15 volts
- 3 DPDT Toggle Switches
- 8 Pushbutton Switches, single pole, momentary contact
- About 18 inches of ¼-inch clear Lucite rod, and enough ¼-inch plywood and ¾-inch square wood strips for cabinet.



The compact Jones plug at the end of the control cable fits into a socket set flush in the side of the layout.

Your first step will be to construct the cabinet. Fig. 5. Cut ¼-inch ply panels to sizes shown for the bottom, two sides, and front and rear panel. Bottom, sides, and rear panel should be permanently screwed and glued together; but the front and top sub-panels should be removable by means of No. 6, ¾-inch Phillips head wood screws. These are much better looking than ordinary slotted-head screws. Reinforce all corners on the side with ¾ x ¾-inch pine stiffeners as shown in the drawing. Next drill a ½-inch hole in the rear panel near the bottom for the control cable. Then screw the three terminal strips to the inside of one of the side panels near the ½-inch hole. Leave an inch or so between the terminals for numbering, and number the contacts from 1 to 33 as shown in Fig. 4.

You can secure the power pack to the bottom panel with wood screws and drill a small hole in the rear panel for the 110 volt cord. Casters and handles may also be fastened to the cabinet. Finally, drill holes in the sub-panel at the points indicated in Fig. 2. This panel will be located just beneath the control panel in the final assembly.

The actual control panel is made of ¼-inch plywood or Masonite. Sand well until it is smooth, then lay out two large holes as shown in the drawing. These are for the two meters and should be cut to fit the meters used. Holes marked SW are for track directional switches—their size will depend on the size of shanks of switches used. Holes marked PB are for the pushbutton switches controlling the track switches. These also will have to be cut to size. Holes marked 1, for the lucite rods, are ¼ inches in diameter. The hole marked R should be drilled to fit the shank of the rheostat used.

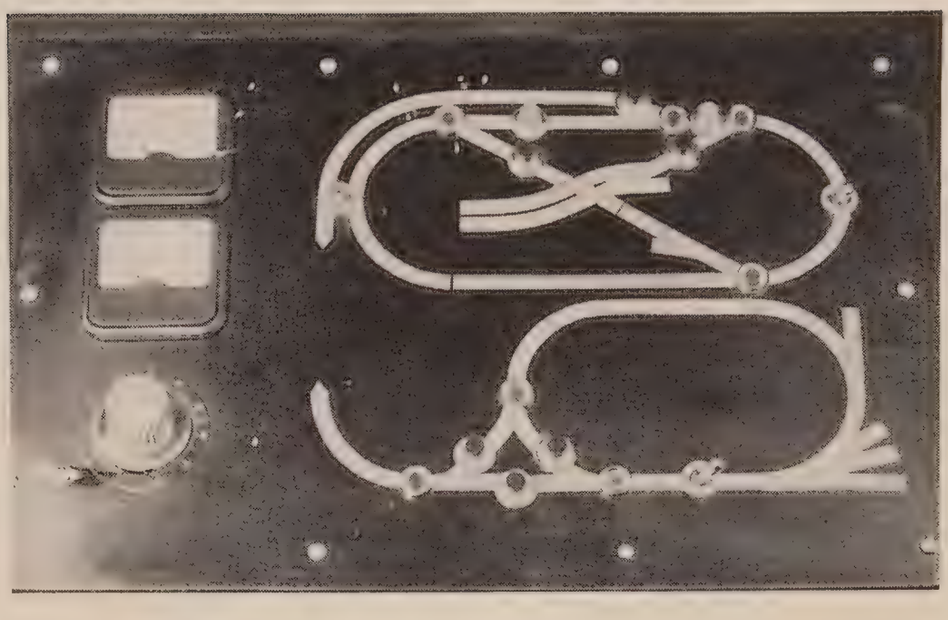
Give the panel two coats of shellac, on both sides and edges, and sand down between coats. Finish top and edges with two coats of flat black paint and again sand down. Cut three ¼-inch strips of scotch drafting tape about 3 ft. long, lay them sticky side down on a board, and paint one red, one yellow and one green. When thoroughly dry, they can be pulled up and reapplied to the panel as shown. The crinkled texture of the tape permits it to be worked easily into curves and looks much better than tape mounted by the usual straight-line, angular method.

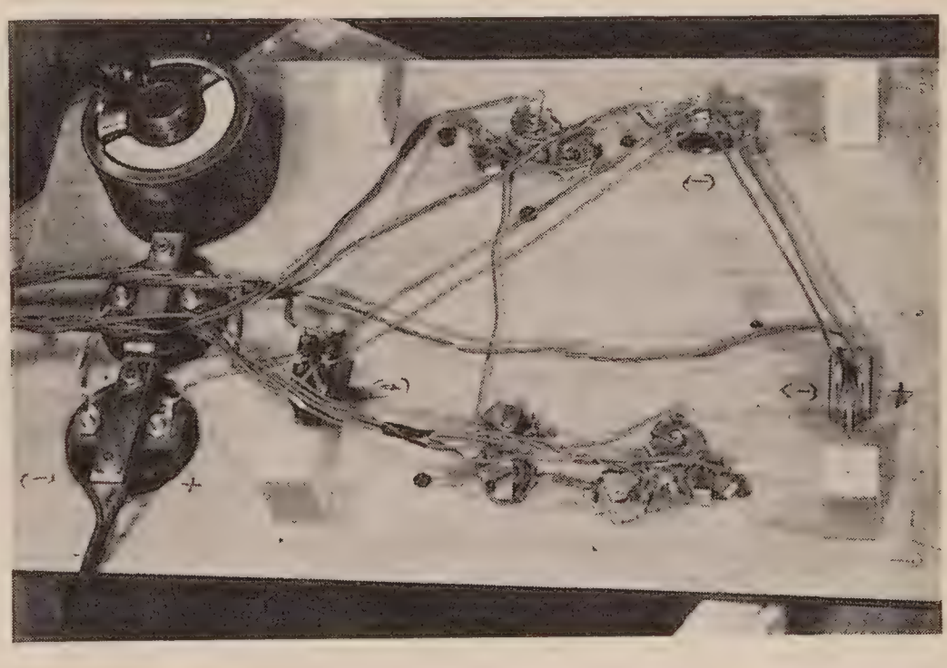
Make sure you cut the ends clean at the edges of the holes. Now give the board several coats of dull varnish.

You'll find that the lucite rods transmit light well from the lamp bulb below, and make very attractive pilot lights. Cut seven pieces of lucite to the lengths shown in Fig. 4, lower left. File a notch in one end with a three-cornered file and file the other end off square. Then polish all cut surfaces with a dampened crocus cloth or crocus paper (obtainable in hardwares). The lucite will take on a high polish. Be careful not to overheat the rod in the process.

Using several rods as guides, locate the sub-panel under the control panel so that everything lines up. Then cut four ¾ x 1¼-inch blocks and position them at each corner of the sub-panel. Glue these to the underside of the control panel. When the glue is dry, the sub-panel may be screwed to the separator blocks. Mount all instruments, switches, and the rheostat on the control panel, being sure that no solder lugs of the switches touch each other. Note that the voltmeter is mounted above the ammeter and that the DPDT toggle switches are mounted to throw in the "direction" of traffic. Finally, mount 14 pilot light sockets on the underside of the sub-panel as shown in Fig. 1 so that the light bulbs just about touch the lucite rods.

Place the lucite rods so that the notch lies between the bulbs (to our knowledge, this is the first time this type of construction has been attempted). The light from the bulb comes in through the *outside* surface of the lucite, hits the smooth surface of the notch, and shoots straight up the rod, coming out of the top in a brilliant spot. You can finish off the projecting tips of the rods by slipping over them small chrome-plated cup washers, available at any hardware store. Cement them to the panel with a small blob of Ambroid cement. The pilot lights can be clear, blue, and yellow. Dipping two of the bulbs into General Cement's Dial Light colors or wrapping them with colored cellophane ought to do it. Refer to Fig. 4 for the location of the various colors. You can, of course, use your own color arrangement here.





Main control panel of the cabinet (above) is a dull black. Track diagrams are made of Scotch drafting tape painted red, yellow, and green. Rear view (below) shows the rheostat, two meters, DPDT switches, and light sockets. Note wood blocks to which the sub-panel is fastened.

To make the control cable use 33 lengths of plastic-covered, stranded No. 25 indoor antenna wire. This is obtainable in 25-foot hanks at radio supply stores. Try to limit this cable to 6 to 8 foot lengths because of the voltage drop; the longer the cable, the weaker the current. Form the wires into a cable and secure it firmly every 3 to 4 inches with scotch electrical tape. This makes a very neat looking job. Solder each wire to the terminals at rear of the plug and to the corresponding numbers of the terminal strip lugs, viz: wire No. 1 at plug will go to wire No. 1 at the terminal strip, and so on. Before soldering, make sure all 33 wires pass through hole in rear of cabinet.

After all wires have been soldered into place, final connections can be made. Use No. 20 or No. 22 plastic-covered stranded hookup wire for all

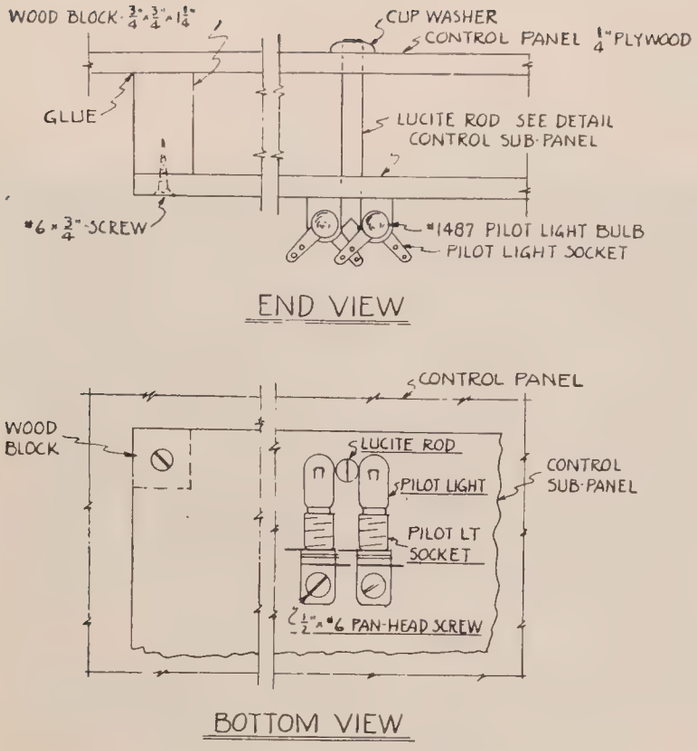


Fig. 1. Socket mountings. Rods lie between bulbs.

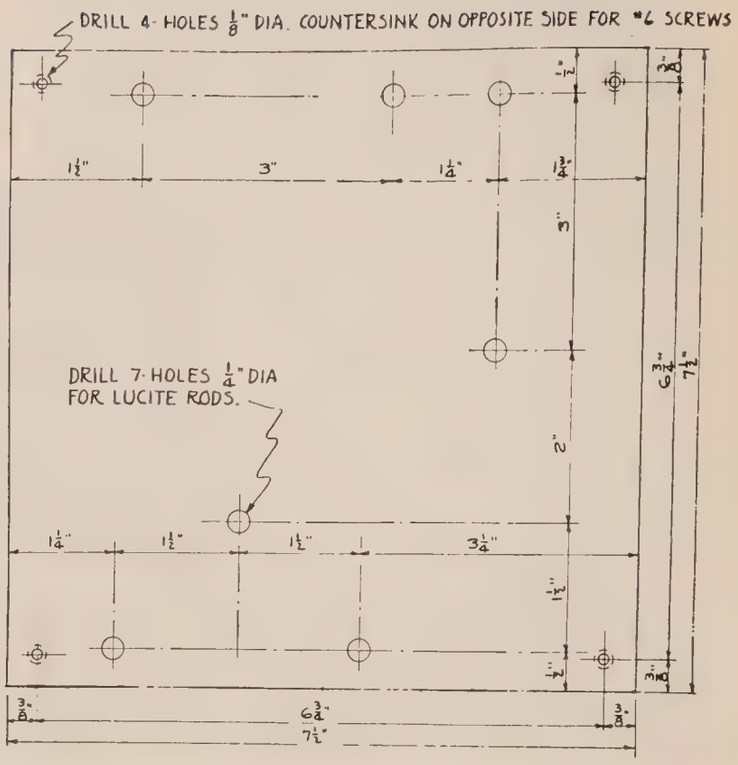


Fig. 2. Sub-panel. Drill holes where indicated.

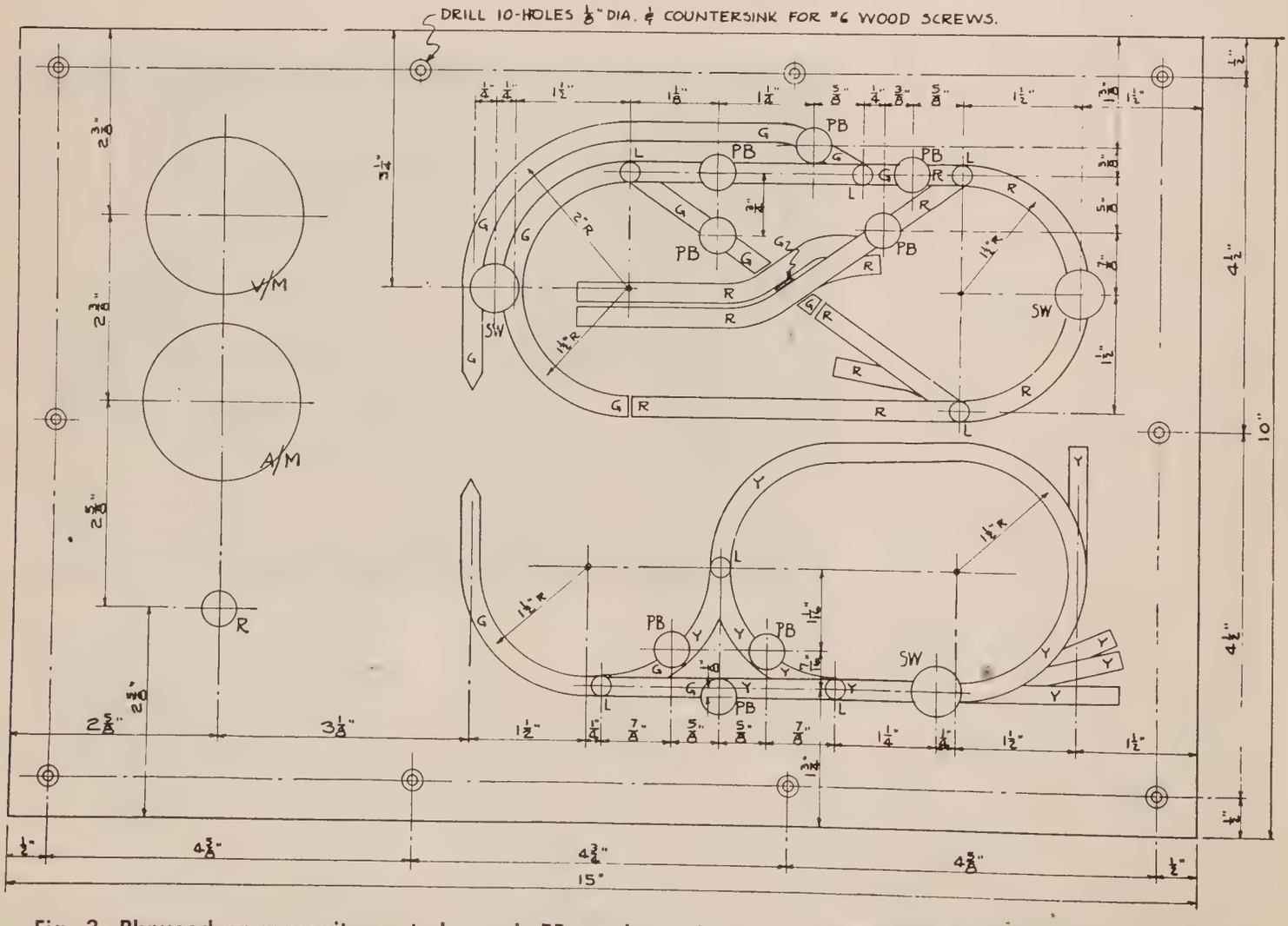


Fig. 3. Plywood or masonite control panel. PB marks pushbutton switches, SW track directional switches.

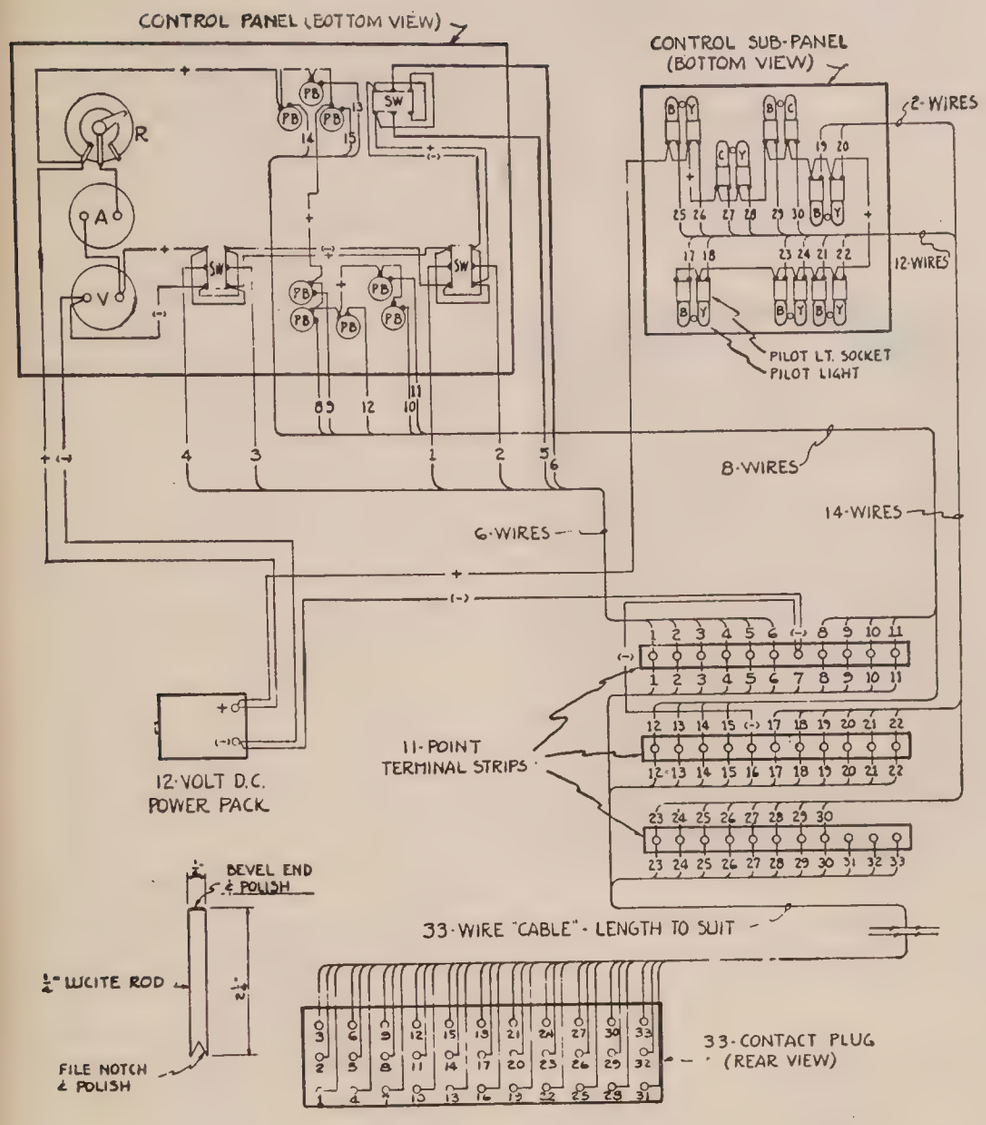


Fig. 4. Detail of lucite rods (lower left). Wiring diagram (above).

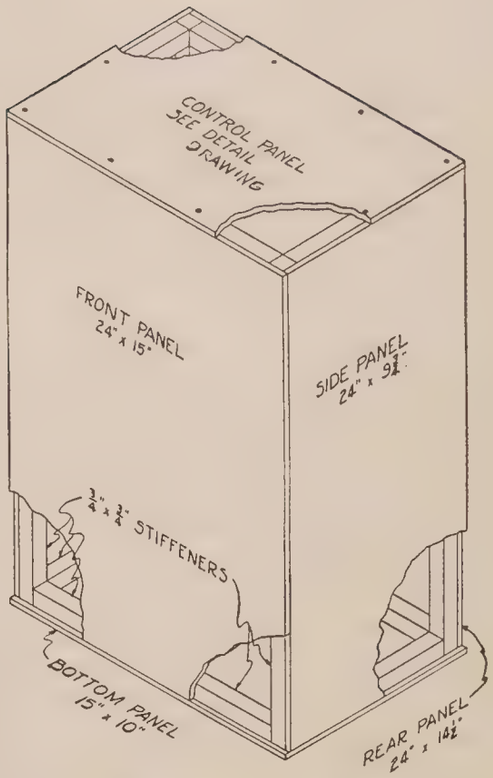

CONTROL PANEL SEE DETAIL DRAWING
FRONT PANEL 24" x 15"
SIDE PANEL 24" x 9½"
¾" x ¾" STIFFENERS
BOTTOM PANEL 15" x 10"
REAR PANEL 24" x 14½"

Fig. 5. Remote-control cabinet.

switches, meters, and so forth, refer to Fig. 4 as you work. A good plan is to cross each wire out on the drawing with a colored pencil after it is soldered into place. Allow enough slack in the wires so that the control panel can be raised for maintenance and inspection, and bunch them together with string or tape as shown in drawing. This adds a great deal to neatness and avoids confusion.

Bugs often creep into a wiring assembly, no matter how careful you are. Here are a few helpful hints. If the ammeter doesn't work, you may have the leads reversed. A good idea is to check *both* ammeter and voltmeter connections before making them permanent.

Directional DPDT switches control traffic in the direction thrown. The switch at the left, Fig. 3, controls the left end of the lower loop and the grade up to the upper loop. These switches should throw from left to right.

Some of the pushbuttons control movement on two switches. The one between switches No. 4 and No. 5 (see track layout drawing in previous issue) throws both the switches to normal or straight-through operation. The pushbutton on the diagonal throws both switches Nos. 1 and 3 to the turnout or reverse position, while the pushbutton just above throws both switches to normal or straight-through operation. The pushbuttons on the station lead and grade turnouts throw these switches to the turnout position. On the wye track each pushbutton controls two switch machines for the traffic route desired. •

HOTSHOT HOGGER by O. Earl Lyles

WHIPPING a hotshot eastward,
Shimmering rills are a-gleam,
Smokestack barking a lively tune,
Primed with a full head of steam.
Drivers are whirling below me,
Pop valve is singing above,
Signals blinking a brilliant green.
Oh, this is the life I love!
Tank is half full of water,
Nearly two-thirds full of coal;
And I'm living the life I love.
Forty-five boxcars are clanging east;
Boy, does the old Mike roll!
Give me a fast-stepping engine,
A night when stars shine above,
Forty-five cars of hotshot freight,

(Continued from page 15)

& Pacific must be laid from Sauk Rapids to Melrose, 35 miles, and connect Melrose with Alexandria, another 33 miles, on or before December 1. A hostile legislature was ready to pounce if "suitable roadbed and rails" were not ready as prescribed.

The long haul of 160 miles from Glyndon to St. Vincent (Pembina) did not, under the contract, have to be completed during this year. This fact, however, was of no comfort. Getting the St. Paul & Pacific to St. Vincent on the international border, to connect with the Canadian Pacific building south from Winnipeg, was of the utmost importance.

Jim Hill knew that the Northern Pacific had the same goal in mind, and though that road, too, was having difficulties, it might well be able to reach the border before Hill and thus be in a position to get the Canadian business. Until the Canadian Pacific had an east-west line, all traffic into and out of Manitoba and the Northwest territories must go through Minnesota first.

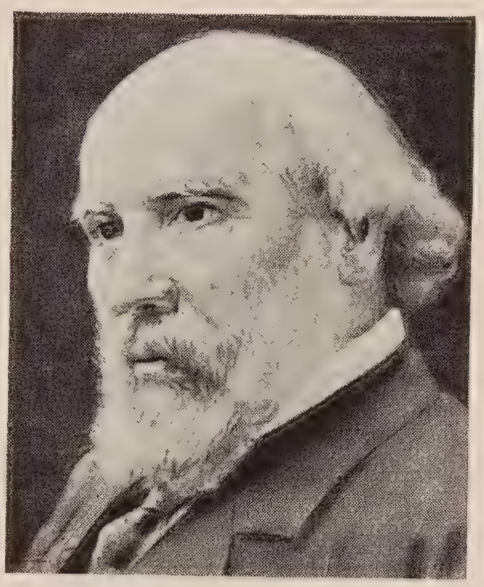
Hill and associates realized that the demoralized and bankrupt St. Paul & Pacific could not obtain credit to complete the sizable portions of track needed to win the land grant. It was said that the steam cars of the StP&P often found the prairie sod smoother and more reliable than the rails and took off, on occasion, to follow buffalo or antelope tracks.

IT WAS late May, 1878. Hill knew that one section of the line must be completed by August, another section by December, and he meant also that the road should touch the Canadian border before the end of the year. He must move swiftly if we were going to succeed.

This he did. Before the end of May he was in New York City, appearing before the Northern Pacific directors. Hill knew that these men expected to receive concessions if they would call off their stated project to build to a Canadian connection. Instead, Hill told them bluntly what *he* was going to do.

First, he would terminate the existing agreement which permitted Northern Pacific trains to run from Sauk Rapids to St. Paul, over the St. Paul & Pacific's tracks at a nominal charge. Henceforth higher charges were to be made. Yes, and possibly another charge for use of the St. Paul's terminals.

Threats and counter-threats were made, and in due time the forty-year-old man with the massive shaggy head won his point. There was a driving quality about Jim Hill that his opponents found hard to resist.



Minus one eye, Jim Hill had the look and the sweeping vision of a scarred old cat from the rimrocks.

Meanwhile, Hill was also demonstrating his methods of getting a lot of railroad built quickly. With a little cash and not much more of credit, he somehow managed to lay hands on rails, rolling stock, a few locomotives, and hundreds of laborers.

Directing the job in person, much of the time at the railhead or in advance of it, he drove his construction crews at a furious rate, laying a mile of track a day, sometimes more. When a crew revolted and quit, Hill wired his man-catchers in Minneapolis, St. Paul, and Chicago to ship him more laborers, fares prepaid, with a huge thug at each car door to prevent them from skipping before they reached the end of steel.

In clouds of June mosquitoes that set oxen to bellowing in pain and horses to leap from their harnesses, the ties were put down and iron laid.

Under the blistering prairie sun of August, when tough men fell from prostration, the work went on with one mile a day the minimum goal—and it was reached or Hill got a new slave boss. Rattlesnakes bit a man here and there. Water with green scum and worse brought dysentery. The crews worked on. There was nowhere to go if you quit.

The nights began to turn chilly; pretty soon there was white on the dirty rag tents in the morning, and then down from the North came snow and sleet and hail and ice and unrelenting winds.

On went the rails. The cottonwoods along the creeks snapped and exploded like rifle fire. Come night, the stiffs were glad to huddle around the stoves in the boxcars, while the Northern Lights blazed with color and crackled like fire.

One mile of ties a day. One mile of iron a day. To count, the ties must be laid down and the iron spiked. Lee Howard, an old man living today in Oregon, was in one of those gangs in 1878 and recalls seeing Jim Hill get down out of his private car to snatch a shovel and start tossing snow. He spelled off one stiff after another, sending each laborer inside to drink a dipper of hot coffee in Hill's own business car parked on a siding in the wilderness.

MEN WORKED for the likes of Jim Hill. Hill called them by their first names, and they stayed and toiled and suffered the alternating hot and cold hells of making a railroad along the Red River Valley of the North.

Then, in October of that year on which so much depended in the career of Jim Hill, the Mackenzie Government of Canada fell. All construction work on the Canadian Pacific Railway ceased.

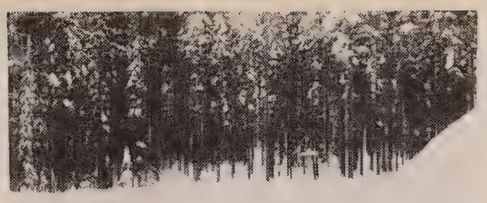
The original plan of Smith and Stephens, as well as Hill and Kittson, was that the Winnipeg-Pembina line should be leased to the St. Paul & Pacific as soon as it was finished, for a period of ten years—or rather leased to a new company which Hill and associates were ready to organize to take over the old St. Paul & Pacific.

But this new crisis in the Canadian Government posed a new threat. The contractors, unsure of getting paid, refused to lay out the money for supplies, and so the work came to a halt.

But Hill, with his back to the wall in Minnesota, somehow managed to provide rails and other material to some Canadian contractors, and they finished the job.

In December the Canadian branch-line reached the border. That Hill's own road was there to meet them was due in large part to the heroic labors of Jim Hill. Those missing links of the St. Paul & Pacific line in Minnesota had been filled, and so on January 9, 1879, the land grant was certified as legally earned. Hill's credit rating immediately went soaring sky-high.

Before the end of January, 1879, the Pembina-Winnipeg road was leased to the St. Paul & Pacific for ten years, and Hill's trains started the unbroken run from St. Paul. In May, a new corporation, the St. Paul, Minneapolis & Manitoba was organized to take over the St. Paul & Pacific at a foreclosure sale. The system then had 565 miles of completed road, with another 102 miles under construction.



Most of Hill's country is northern. They have *winter* there, a season that brought out the best in Jim Hill.

With these hurdles passed, the Empire Builder was on his way. How he extended his railroad system, which became the Great Northern with 2,770 miles of road, on January 31, 1890, and how he held it together in the face of fierce attacks from Wall Street, is a saga of the Golden West that has been told and retold and still goes ringing down the years. Today the Great Northern boasts about 8300 miles of modern track and some of the world's best freight and passenger trains.

Until his death in 1916, the one-eyed titan was enormously proud of the empire his genius and vigor had created, and he fought ceaselessly to defend it. On one occasion, after beating off a stock-market raid by E. H. Harriman, the leonine Hill wrote in triumph:

"I've made my mark on the surface of the earth, and they can't wipe it out."

The making of that mark was James J. Hill's great adventure. ●

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Authentic Western Jeans

Lee Chetopa Twill
Shirts and Pants

THE H. D. LEE COMPANY, Kansas City, Mo.

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Practical
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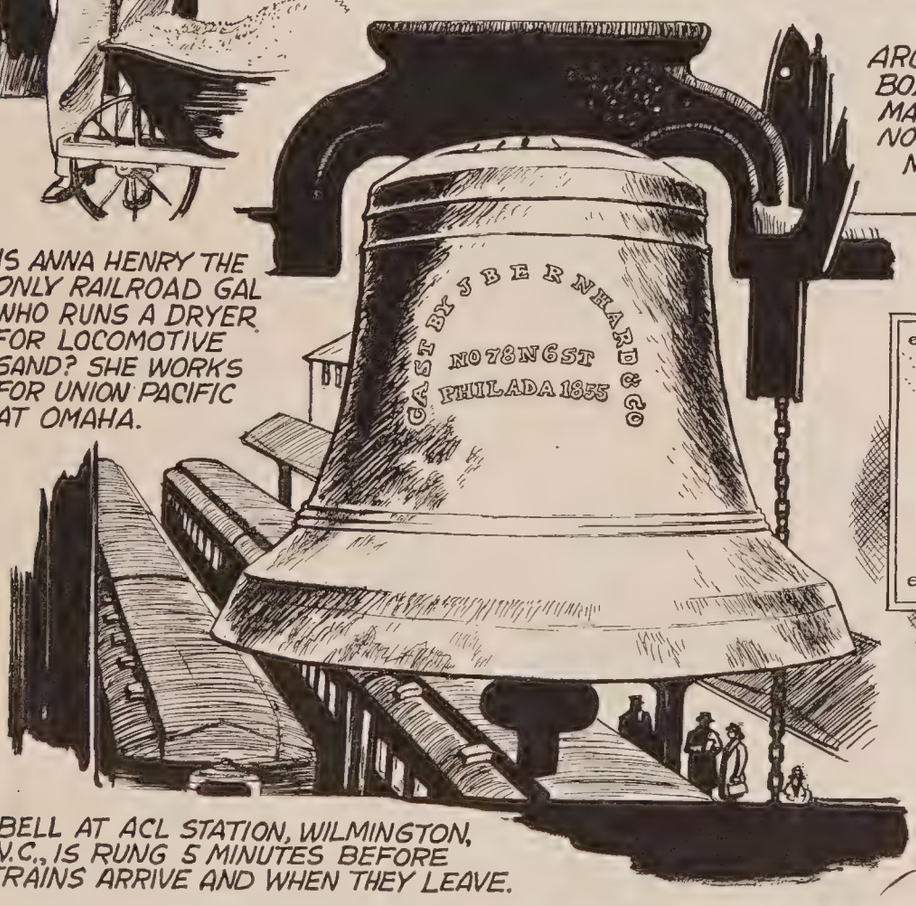
CLOTHES
FOR WORK AND PLAY

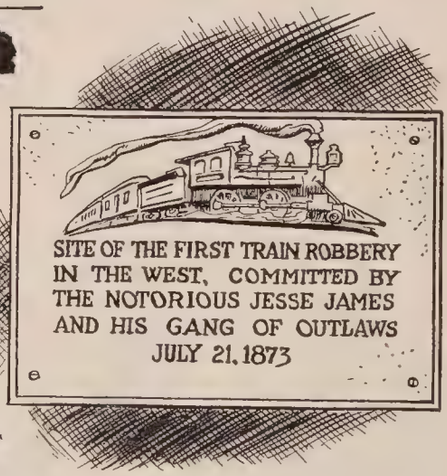
Along the Iron Pike by Joe Easley

IS ANNA HENRY THE ONLY RAILROAD GAL WHO RUNS A DRYER FOR LOCOMOTIVE SAND? SHE WORKS FOR UNION PACIFIC AT OMAHA.

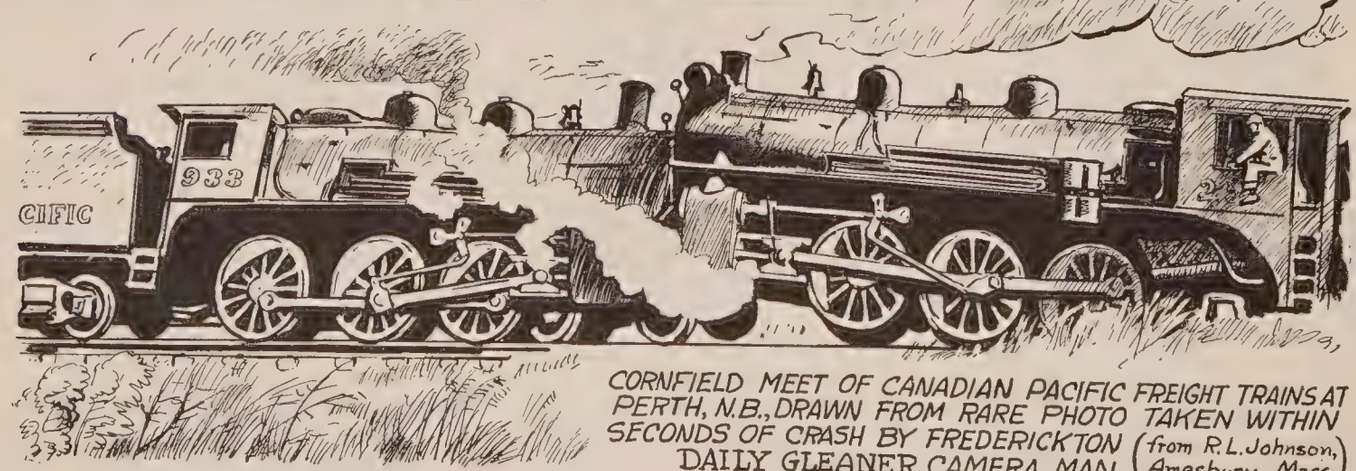
AFTER FIRE GUTTED ILLINOIS CENTRAL DEPOT AT ARGYLE, WIS., IN 1915, CONVERTED BOXCAR SERVED AS STATION. MAN IN FRONT IS J.W. DEARING, NOW RETIRED AGENT, WEST POINT MISS. (from IC Magazine)



BELL AT ACL STATION, WILMINGTON, N.C., IS RUNG 5 MINUTES BEFORE TRAINS ARRIVE AND WHEN THEY LEAVE.



BRONZE PLAQUE ERECTED BY THE ROCK ISLAND NEAR ADAIR, IOWA.



CORNFIELD MEET OF CANADIAN PACIFIC FREIGHT TRAINS AT PERTH, N.B., DRAWN FROM RARE PHOTO TAKEN WITHIN SECONDS OF CRASH BY FREDERICKTON DAILY GLEANER CAMERA MAN. (from R.L. Johnson, Amesbury, Mass.)

SERVICE LETTERS

(Continued from page 25)

and in answer to the oft-repeated lie that boomers didn't marry, or, if they did, pulled the pin on their marital partners as often as they did their jobs. From the bottom of the tin box I lift out a compact bundle of dog-eared documents. These are my old railroad service letters.

To railfaring men such letters have more sentimental value than love letters. They are also very important in documenting your request for benefits under the Railroad Retirement Act. The year is 1955 and I suddenly realize that half a century has passed since the first entry of my name on a railroad time slip. That's quite a while, when you come to think of it.

I shuffle through the bundle, reading the letterheads, and the echoes fill my ears. Union Pacific. I hear the howl of a wild winter wind on the Laramie plains and feel my face stinging from the impact of hard-driven snow. Not the feathery flakes that poets sing about, but tiny ice pellets that cut like a sand blast.

Letters from the Burlington echo in memory's ears, the bark of a switch engine in a Chicago trainyard. The only left-handed engines I ever saw were in the Q. I wonder what happened to them? And here's the D&RG —the "Dirty, Ragged, and Greasy," we used to call it. I hear once more the first Mallets that pike owned as they bellow upward on the old Soldier Summit grade, the steepest main line in America at the time.

Northern Pacific. The fragrance of the packing sheds around Wenatchee when the red-cheeked apples were being harvested, the spicy smell of hops in the Yakima Valley, the brightly painted tepees of the Indian hop pickers, and the thump of their drums under the stars.

The Southern Pacific will always be linked in my mind with the switchmen's "outlaw strike" of 1920. I was in that up to my ears. Sixty-four of us were named in a Federal indictment charging "conspiring to interfere with interstate commerce," but the case never came to trial, and Father Time himself voided the indictments.

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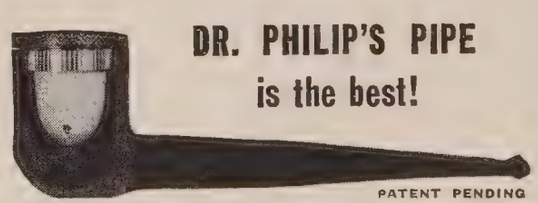

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I scan a few Santa Fe letters, frayed and yellowed with age. They bring up a heavenly smell of blossoming orange groves in California at night. You never seemed to notice it until after sundown and then perfume filled the warm darkness as if the gates of Paradise had been left ajar and a host of white-robed brides was assembling. Yeah, the Santa Fe moved plenty of golden juicy oranges in my time—and still does.

ALL IN ALL, there is quite a sheaf of papers. They echo the sound of roaring stacks and the lonesome wail of chiming whistles, the voices of old friends along the boomer trail. Most of the engines have long since been scrapped, and a lot of warm-hearted comrades have been pushing up the daisies these many years.

I left my seventieth milepost back along the road and have accumulated more nostalgia than money. I am glad that in the years of my hot-blooded youth I was a boomer. I have seen a small part of this wonderful world, and wish I had seen more.

As a boy it never occurred to me to carve out a railroad career for myself, despite the swaggering tales of boomer uncles who had been my early heroes. For a while I tried the sea, and visited some strange ports, but the sea was a hard life, tolerable only to those who knew nothing else. Quitting my last ship in Philadelphia, I started hoboing westward on the Pennsy and landed at one of the world's busiest spots, in the dynamic surge of one of the biggest booms in American history. That was the Pittsburgh District in 1902.

You could have spread a map, placed one point of a compass on the dot labeled Pittsburgh, and described a circle with a radius of 150 miles, and you would have ringed two-thirds of the manufacturing industries of the U.S.A.

Blast furnaces, rolling mills, drop forges, foundries, coke ovens, brick yards, sewer-pipe factories, potteries, and a hundred other fabricators of metal and clay poured their columns of smoke into the sky to join the sooty plumes of thousands of locomotives and hundreds of steamboats on the river. Coal was plentiful and cheap, and no attention was paid to the proven fact that black smoke meant poor combustion and inexcusable waste.

Pittsburgh actually gloried in her nickname, "the Smoky City." Business men pointed with pride to the reeking stacks as evidence of her enterprise and prosperity. Harassed housewives waged a lifelong battle to keep the family washing from being smudged while drying, and the "white-collar workers" had to wipe the smut off their tall celluloid collars twice a day if they wanted to keep in good standing.

Friendly shacks on the freight trains I was riding told me that railroad jobs were to be had for the asking at any division point on any road. Some pikes would hire only experienced men, but the Pennsylvania, for example, preferred greenhorns, the greener the better.

So, at Wall Yard, on the eastern outskirts of Pittsburgh, I filled out my first application, passed my first physical examination, and earned my first day's pay as a yard brakeman. This job lasted exactly four nights. They assigned me to a "stake engine." In case you don't know it, this was a method of switching boxcars that was almost extinct, even at the time, but survived in backward spots for a year or two afterward.

One goat would drag from twenty to twenty-five cars out onto the lead. Another ran on a parallel track, shoving a small car that carried a stake. The stake was a stout iron-bound spar, attached by a swivel and steered by a lever. Its free end was eased against the corner of a car on the lead, the stake engine kicked 'em hard, and the car, or cars, rolled into the appointed track. The riders, armed with brake club and lantern, made the cuts and rode the cars after the stake had been set.

This was supposed to be easier on cars and contents than the yanks and slams of the usual yard goat. I dunno. It seemed silly to me and was certainly dangerous. So many men were killed and maimed that Wall Yard became known as "The Slaughter House." In my fourth, and final, night on the Pennsy payroll there, two lads went under the wheels—and the rest of us went home. According to superstition, still quoted on occasion, gruesome mishaps came by threes, and nobody wanted to be the third casualty.

THERE wasn't much financial gain from that first tour of duty among the boxcars. After deductions for company insurance and for a pie-book, or meal ticket, I had hardly enough left to jingle in one pocket. However, I did profit in an unexpected way, and unconsciously took my first step on the boomer trail that I was to travel for many miles and many years.

After I had sweated out that first ink-smeared application, the trainmaster's clerk put me through the eye test before passing me along to the medical examiner. He hauled out a box filled with hanks of yarn of many colors, all dirty. I sorted out the shades he called for, with speed and accuracy.

Then he handed me a spectacle frame without any lens but with a solid disc that could be flipped into position to cover either eye. After putting this on, I faced a placard on a wall about twenty feet away and was told to read the third line from the bottom. This I did easily with the left eye, but made the startling discovery that I had very little vision in my right eye. It looked as though I was sunk.

Grasping at a straw, I said: "I'd like to finish this test after lunch, if you don't mind. My eyes are tired from riding a freight last night, instead of sleeping."

The clerk glanced at the big clock that ticked solemnly on the wall. It was nearly noon. He nodded.

"Okay. Make it one o'clock."

I loitered outside until I saw him head for the beanery; whereupon I ducked inside, copied that chart on a card, and memorized every line of it. That afternoon I had no trouble "reading" the thing. I could have "read" it with both eyes covered. Anyhow, I was young then and life was exciting. One chart more or less,

one job more or less—what did it matter?

The same chart was used everywhere on the Pennsylvania system. Some months afterward, and a couple of jobs later, I paid a visit to an optical supply house in Pittsburgh and came away with a catalog. It contained a couple of pages of such charts, in miniature, and listed the railroads on which each was used. I memorized them all. Since then I have had more than fifty eye tests and passed nearly all of them, but not one honestly.

The only examiner who ever flunked me was the Northern Pacific medico in St. Paul. He had an elaborate setup. For the color test he used a big panel on which tiny electric lights flashed in various combinations of red, blue, yellow, green, and purple.

His letter chart was a tall, vertical strip covered by an electrically controlled blind. The doc would press a button that showed you just one line at a time—and the chart was one I had never seen before.

That jasper gave me a thorough test. Then he said: "You know, of course," glancing at my application, "Mr. McClintock, that the vision in your right eye is nearly gone. In my opinion, it's been that way for years. I doubt if it ever was any better than it is now. According to your record, you have worked in train and switching service on several railroads." He fixed his own blue eyes on me. "How did you do it?"

Well, he pumped me for quite a while in an effort to learn how I had got by the inevitable eye tests. But no use! I was not giving away trade secrets.

IF I HAD CUT in my fast-thinker, I could have beat that Northern Pacific chart like the rest. Another "one-eyed" boomer did so that same afternoon. He managed to get his good eye tested first. When the disc had been flipped over to cover the other peeper, he coughed, cleared his throat, and walked over to a spittoon. While his back was turned, he flipped the disc back, and the examiner never knew he tested the same eye twice. And the boomer got away with it.

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MORE CLASSIFIED ON PAGE 59

Later I looked up the Northern Pacific chart at an optical supply house. After that I could have taught a blind man to pass the test with his cane.

Around the boomer hangouts I learned that several newly hired brakemen were leaving that night for Fargo, N. D., and I wasn't long in finding them. Each had a pass and a letter typed on company stationery addressed to the trainmaster at Fargo stating that the bearer (name in full) had been duly examined and hired in St. Paul. It was no great trick to swipe a letterhead, copy the note in a typewriter shop, and scrawl a good imitation of the illegible initials that signed it. Then I boarded the train with the gang, and the conductor accepted my story that I'd lost my pass.

During that ride I learned how the other lad had beat the eye test. And there were two fellows in our bunch who had never been near the Northern Pacific offices at all. They had picked up their passes and notes from other boomers for five bucks per. The guys who had sold the passes probably signed up with the Great Northern the next day. Both roads hired and shipped brakemen, firemen, and switchmen to division points when and where they were needed.

Although I expected to be fired within a week, nothing happened. In fact, I held that job for four months without going near the pay car until the day I finally blew up and quit. Assigned to an extra crew, my partner and I hustled 'bo money in quantities that enabled us to live well while waiting for our company checks.

We were lucky in drawing a boomer conductor who didn't care any more about his job than we did about ours. Home guards—men who were brakemen all winter and conductors for three or four months in the summer—were likely to turn their shacks in for hauling harvest stiffs, at one buck each, and at times would also complicate matters by tossing off "passengers" from whom the brakemen had already collected.

BUT I AM way ahead of my story. Let's hark back to the time when I had just pulled the pin on my first job. I hit the "Panhandle" (the PCC&StL) in Pittsburgh for a job, passed the examination without trouble, and was shipped to Steubenville, Ohio. There I marked up the extra board.

Right away I was put on a rawhiding freight run on the New Cumberland branch, a twenty-mile feeder that ran from New Cumberland Junction up the West Virginia side of the Ohio River. The night crew, to which I was assigned, did most of the work.

A two-car passenger train made two round trips a day between Steubenville and Chester. The day freight had to keep out of its way. At night we had the railroad all to ourselves and never in my life did I work harder at braking. I hadn't sense enough, or experience enough, to realize that there must be plenty of easier railroad jobs. I was just a scissorbill and there is no telling how long I might have stuck around. But within a month the company made up my mind. They summoned me to Steubenville and summarily fired me.

In my innocence, I had told the truth in filling out my application, listing my brief stay on the Pennsy and giving the same previous employment references. I had been a good boy, working my head off, and what had it got me?

But I was learning. I managed to steer clear of stake engines and to pass eye tests with only one eye. And I had discovered that in filling out an application form it was easier to get away with a water-tight fairy story than to tell the truth.

A few days later I was braking on the Baltimore & Ohio between Benwood and Grafton, W. Va., where I really picked up some knowledge of railroading. It was a single-track pike, with several steep grades, and the freight movement was heavy. I began to understand train orders and time-card rights and, since much less than fifty per cent of all freight cars were equipped with airbrakes, I acquired the knack of swinging my weight on a brake club on those hills.

Benwood was a steel town, a suburb of Wheeling. Both the B&O and the Pittsburgh, Wheeling & Kanawha were pretty much boomer jobs, where the names on the extra board changed constantly. The big hurdle for a guy on a new job was the monthly payday—plus the two-week holdback that was almost universal. If you started around the middle of a month you were likely to work till the fifteenth of the next month before you drew a check, and even then you'd get only two weeks' pay. It was possible, in most places, to sign up for pie-books and a room, but a lot of men pulled the pin during the first few weeks because they got tired of being broke.

A hospitable brewery in Benwood made that first month easier for me. An obliging clerk there would hand out five brass checks to any applicant, and in an adjoining building each check would buy you a mug of suds or a big bowl of hot, nourishing soup. There was also a bountiful free lunch counter, loaded with platters of bread, pickles, bologna, liverwurst, cheese, and the like.

Going back for a second stack of checks on the same day was not ethical, but we used to gang up outside and put the mooch on the local boys who might have a check or two left. Railroaders were well liked in and around Wheeling. Our crusher hats and thousand-mile shirts advertised our calling well enough.

The town boasted a large saloon, the White Cloud, that was—like Fingy Connor's in Buffalo, the Highball in Cleveland, and Hinky Dink's in Chicago—a stop-off for all the shovel stiffs, mule-skinners, oil-field roughnecks, steamboat roustabouts, hobos, and yeggs that drifted through. A flop at the White Cloud would cost you fifteen cents, and a huge mug of beer or a jigger of whisky, a nickel, while fifteen cents at the lunch counter would buy you just about all the plain grub a hungry man could eat.

All in all, Wheeling was a popular place to "blow in" between jobs. It had a burlesque house, a theater, and a couple of "variety halls." Also a red-light district, cheap and tawdry, and attractive only to a lonesome guy with a bellyful of booze.

THE EARLY YEARS of the century, right up to 1907, were years of incredible industrial expansion.

Jobs braking or firing could be had for the asking. Promotion to conductor or engineer depended upon how long you stayed in one place.

Brakemen got $1.80 to two bucks per hundred miles, yardmen worked a twelve-hour shift for $2.52 a day or $2.64 on the night shift. A check for $120 meant a fat month for any hogger or conductor. Section hands drew $1.35 per day, yard clerks $35 a month, and telegraphers $50 to $60. The Morse slingers toiled twelve hours per shift, seven days a week, as did all yard crews and clerks.

A paid vacation was undreamed of among railroaders in those halcyon days, and we had no such thing as a Workmen's Compensation Law to ease the casualties. Train operation was a lot more hazardous then than it is today. Collisions and derailments causing death or injury of employes were too common to be featured in the newspapers. Wrecks made the front page only when a flock of passengers were mangled or perhaps burned up from the splintered wooden coaches catching fire.

Railroaders who "got hurt" usually received a raw deal. "Getting hurt," in rail parlance, meant losing an arm, a leg, or an eye. Sprains, broken bones, or the nipping off of a couple of fingers didn't count. You had to be carried away on a stretcher to be "hurt." A switchman could go back on his old job after parting with a finger or two, but he'd never be able to pass an examination for work on another road.

The injured man, in hospital or home, could count on an early visit by the claim agent, coming like a vulture flapping down to a feast. These ghouls were smooth talkers, promising "lifetime jobs" and cash payments if you signed a "release" at once. Often these releases were signed when the patient was still in shock or partially under an anesthetic and before he could consult an adviser. Even so, the courts almost invariably upheld them —assuming that the poor victim could find a hack lawyer who would handle the case for a contingent fee.

Meanwhile, the locomotives were getting bigger, and the downtrodden tallowpot had to shovel more and more coal. The Pennsy, for instance, replaced its class R's with H4's, and then came the first of the H6a class. At the same time, trains were growing longer. New cars were being built of steel, or at least with steel underframes; but most of the nation's rolling stock was still built of wood, and the new, powerful engines simply yanked them apart. "Pulling a lung" in starting a heavy train became commonplace, and trainmen got plenty of exercise in chaining up the cripples.

Few of us who hit the boomer trail did so deliberately—at first. We drifted because we had no roots. The earnest home guard, careful to keep his record clear, got no more gentle handling from yardmasters and trainmasters than we tramps did. These petty officials often grew cocky with a little authority, while the Brotherhoods were not strong enough to protect their membership against abuse.

That, of course, was long ago. The Brotherhoods are stronger now.

On one occasion I saw a disgruntled official come close to "cleaning the board" in a fit of temper. Getting fired like that was a joke to the boomer, but to the home guard it might be tragic. If he was a married man, trying to raise a family and buy a home, getting canned was the great fear that haunted him.

I NEVER was interested enough to check on the home guard's probable chances; but Clifford Funkhouser, a boomer conductor, did so.

"Reared in a Santa Fe division point," said Funkhouser, "I saw a continuous parade of men coming and going. I can nearly count on my fingers the conductors of 1905 who lasted until, let us say, 1930. Deduct the few who died or were killed on duty. The balance, except for four or five, got canned. I took a good look at the seniority list; only five men of all those hired in 1905 survived out of about 1800 who didn't.

"In 1910 at least 250 men were hired; in 1930 only eight were left. Of at least seventy-five brakemen who hired in the spring with me, only one was left. One out of one hundred hired that fall was left—and there was a space of two years on the seniority list.

"But during that time some 400

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men were hired, none of whom lasted twenty years! During a period of fifty-five years, of about 10,000 men hired there, only forty ever got to be passenger conductors!"

In the face of those figures, I ask you, who was smarter, the home guard or the boomer?

We boomers never worried about losing or quitting a job, because we knew there was always another, just as good, a hundred or a thousand miles away. A favorite remark was to say you were going to the Indian Valley Line, the IVL being a mythical pike somewhere in the Big Rock Candy Mountains where you could always find a job at top pay and ideal working conditions. Sometimes the term *Indian Valley Line* was used in referring to death.

Locomotives hauling heavy drags made the same kind of noises in the canyons of the Canadian Rockies as they did on the grades of the Blue Ridge Mountains in Ol' Virginny, and the same dingy red boxcars or yellow reefers trundled from coast to coast, and there was little difference in cabooses and switch shanties.

Yeah, looking over my grimy stack of service letters in the attic of my home the other day brought these thoughts into my mind. Echoes of the past.

I recalled how the railroads in the boom area of the early 1900s were literally buried under an avalanche of traffic. Yards were enlarged and new ones built. Main lines were double-tracked—triple and quadruple-tracked on parts of the busier systems. In a new era of industrial consolidation the big roads were eating the little ones, the Gould interests grabbing where they could, and the mighty Ed Harriman adding to his empire. At the same time, the Canadians were pushing across the prairies.

This was the background against which the boomer appeared. Where new steel was being laid, where traffic was heaviest, where the stress and hazard of railroading were greatest, he was seen at his best. Accustomed to working under pressure, he was far more resourceful in any situation that called for headwork than the average home guard, the guy whose entire experience covered only a hundred miles or so of one road.

On the other hand, the boomer had traits that made him undesirable as an employe—from the company angle. Especially those companies whose steel was located east of the Mississippi River. If the boomer tired of a job he was likely to bounce his lantern off the side of a boxcar or punch a trainmaster on the jaw and announce that, so far as he was concerned, the work in that area was all done.

MOST BOOMERS drank a goodly share of red-eye—but so did most home guards. Yards where the roving element predominated might see a fairly complete alcoholic tie-up on payday. And not all boomers were competent railroaders. The tribe also numbered plenty of irresponsible bums, men who were as tagged as sauerkraut and acted more at home in the flop houses of Skid Row than anywhere else. Under this heading I recall such characters as "Stew" McGraw, "Arnica Jack," "Buck" Gary, and "Three-Eye" Martin. The last-named had earned his moniker by confining his ramblings to three states: Indiana, Illinois, and Iowa.

For many years, under the Diaz regime, the railroads of Mexico hired American conductors and engineers, almost exclusively. Came the inevitable revolution, in 1911, the rise and fall of Madero, and the years of warfare that followed. Quite early in the game the *gringo* railroaders made that strategic move known as "getting the hell out of there." They had been boomers before they headed into Mexico and they simply joined the ranks again.

In the spring of 1912, when I rode cabooses with Western Pacific crews from Stockton, Calif., to Salt Lake City, it seemed to me that at least half the brakemen on that pike were ex-conductors out of Mexico. More of them worked on the Oregon Short Line and the Spokane, Portland & Seattle. They were, almost without exception, capable men and well-groomed citizens.

Some wore custom-tailored suits—a lot of oldtimers will remember "Duke" Randall, "Eat-em-up Jake," "Dandy Jack" Carroll, and "Mulligan Holmes." I knew at least four "Society Reds," as well as one "Society" Brown. Mulligan Holmes sported a two-carat diamond shirt stud, which he wore in the front of a soft-collared silk shirt, while the third finger of his left hand was adorned by an even larger rock in a heavy gold ring.

Working conditions being what they were, you might think that the railroad companies would have welcomed anyone willing to put up with them, but this was not usually the case. Most brass collars regarded the boomer with jaundiced eye, and their standard hiring procedure was designed to eliminate him.

How did all this business of railroad booming get started, anyhow? Well, prior to the Pullman Strike of 1894, sometimes called "The Debs Rebellion," the railroads had not been very fussy about previous personal records of applicants for employment and on some roads conductors hired and fired their own brakemen. But after the walkout of 1894 they tightened up. They demanded service letters covering previous railroad employment, and a vicious blackball system was built around the watermark of a "crane with the broken neck" that appeared on letters. This hidden watermark instantly identified the bearer as a striker or strike sympathizer, not to be hired under any circumstances.

Thousands of railroaders who had joined the American Railway Union were thus forced to begin life anew, working "under a flag," an assumed name; and beating the hurdle of personal record became a game in which all boomers took a hand. A lot of them "flagged" when there was no real necessity, just for the hell of it.

In my case, rambling about the country, I alternated between the coal scoop, the switch key, and the brake club, not to mention the banjo that I tickled in gin mills and honky tonks to get a few bucks. Thus I collected a stack of service letters. Looking them over in the attic the other day prompted me to set down on paper a few of the memories they conjured up, memories of the wild, free days that are no more.

TRANSIT TOPICS

(Continued from page 43)

on the half-mile trip between stations.

Structural changes necessary would include the removal of forty-seven steel columns at Times Square and the extension of the right-of-way much farther east at Grand Central to reach the East Side IRT subway. While this work is being done, the shuttle trains would continue to operate. The 130 small ten-seat passenger cars, the moving belts, motors, and other appurtenances required by the new system would cost $3,500,000.

FROM KOREA, Pvt. Allan H. Berner writes that the variety of equipment on the narrow-gage Seoul tramway system fascinates him. Rolling stock consists of everything from dilapidated forty-year-old open cars with single trucks, to double-trucked steel cars with arched windows and sliding doors, refugees from Atlanta's Georgia Power Company fleet. Numbered now in the 400's, these double-ended, deck-roofed cars made up the 800-900 class on the GPC which went bus in 1949. Such incredible things as single-trucked sprinkler cars are also run throughout Seoul when hot, dry weather makes the rather primitive streets dusty.

THE FIRST of a group of 200 cars for New York City subway's IND and BMT divisions have begun arriving in the Transit Authority's Coney Island Yards. Coupled to trains at ACF Industries' Berwick, Pa., plant, the 67-foot cars were hauled over the Delaware, Lackawanna & Western to Hoboken, N. J. Fortunately subway and railroad gage were the same. Lighters then transferred them to Bay Ridge in Brooklyn for delivery. Scheduled to arrive at the rate of two trains (twenty cars) a month, they are the first to be bought by the Authority since 1950 when 500 cars arrived for service on the IND and IRT-Flushing lines.

Built at a cost of nearly $25,000,000, the cars have improved fluorescent lighting, increased use of stainless steel, and plastic-covered foam-rubber cushions. Six powerful thermostat-controlled fans recessed in the double car roofs will keep the temperature around seventy in winter. They will speed up to draw in cool air alleged to fill subway tunnels in summer.

WE NEVER THOUGHT we'd see the day when the end would be in sight for the last trolley cars in New York State. Only three companies remain—the Brooklyn routes of the New York City Transit System, formerly the Brooklyn & Queens Transit; the Queensborough Bridge Railway line; and the subway service of the Rochester rapid transit subway route; and these are going fast.

The New York City Transit Authority has recommended the discontinuance of the last three Brooklyn trolley routes all of which operate to Coney Island. Any day now the Board of Estimate may give its okay, and the cars will be taken off forever. Because of a drop in passenger traffic, only two of the trolley lines would be supplanted with buses.

Thus Brooklyn's Coney Island Avenue line, which got its start as a horse-car route, July 3, 1862, may not be around on April 19, 1955, for the 65th anniversary of its first trolley run from Park Circle to Coney Island. Ed Watson, 934 Albemarle Road, Brooklyn, N. Y., asks, "Would I be safe in saying this is the oldest electric line in continuous service in this country?"

Completion of a low-level bridge between Queens and Welfare Island may spell the doom of the elevated Queensborough Bridge trolley, which has been operated only because of the inaccessibility of the Welfare Island station to buses. A roadway will soon run directly over the new bridge from Queens to the island.

At Rochester, after years of indecision, eight Republican members of the Rochester council approved recently the abandonment of the subway line as of the end of 1955. Part of the subway bed will be sold to the state for paving as a highway. Bill Gordon of Rochester says local newspapers and citizens have condemned the action but are apparently unable to do anything. The sole dissenting vote was Democrat John G. Bittner's. Bittner called the action hasty, saying, "For every two people forced off the subway, it would mean another automobile in the streets. Can the streets stand this extra load?" The only portion of the subway to remain in operation, for freight only, would be about three miles of track west of Goodman street.

"I WONDER if *Railroad Magazine* has ever published the story of a car line that operated for only one day?" writes

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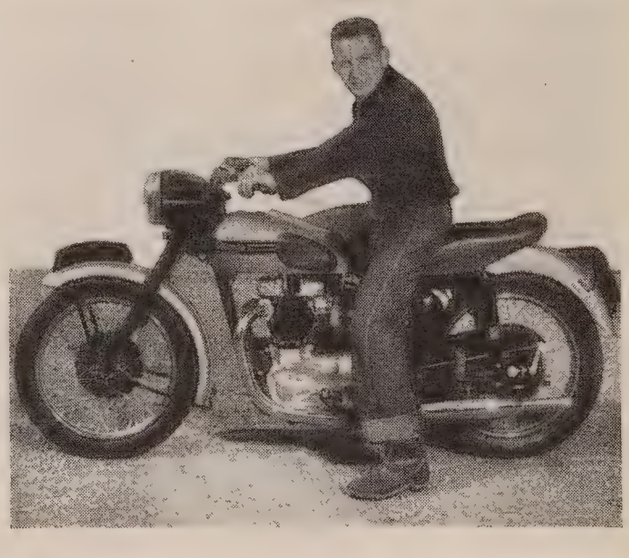

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Joe Shannon, 4912 30th Avenue South, Minneapolis, Minn. "In Minneapolis before World War I a promotor enlisted local support for a race track and grandstand, supposed to replace the great Indianapolis speedway in importance, about one and a half miles from the Fort Snelling trolley line. Twin City Lines built a double-tracked extension to the new Twin City Speedway to serve anticipated race track crowds. One race was held, and that was all! The whole scheme fell through, and cars never again ran to the speedway. TCL ripped up their tracks after only one day of revenue service over what turned out to have been a pretty expensive mile or so of track."

THIRD-RAIL PHONE COMMUNICATION was demonstrated recently on the Flushing line of the New York Transit Authority's IRT system. Using existing signal cables and the third, or power, rail to transmit FM carrier waves, the system, developed by the Union Switch and Signal Co. in conjunction with the Transit Authority, provides two-way communication between motormen and dispatchers.

During the tests last fall, a dispatcher at Times Square spoke into a small hand microphone to a train moving under the East River. Replies were received through an amplifier from similar equipment aboard the train. Observers were impressed with the clarity of sound, lack of static, and continuous operation, even while the train was crossing a switch.

Use of the system will allow instant reporting of emergencies, which at present must be done by stopping at a trackside phone. The system may be linked with an amplifying system in the trains themselves so that motormen can inform passengers of the cause of delays and advise them to change trains if a long tie-up occurs. The Pennsylvania, New York Central, Baltimore & Ohio, Long Island, and New Haven Railroads, some of which now use a microwave radio relay not dependent on continuous contact, are interested in the system.

"TO MY KNOWLEDGE," writes Theodore R. Hallenbeck, 1164 Pacific St., Brooklyn 16, N. Y., "no President of the United States has ever been involved in a serious rail accident, with one notable exception—President Theodore Roosevelt. It happened this way:

"On September 3, 1902, while the President was on a speaking tour of Western Massachusetts, he, Governor Murray Crane, and Roosevelt's friend, secret service agent William Craig, entered the Governor's carriage in Dalton, Mass., bound for Pittsfield where Teddy had a speaking engagement. The carriage started off at a rapid clip and then, three miles outside of Pittsfield, plunged downgrade along side the tracks of the suburban Morningside trolley line. As the carriage reached the foot of the hill where the road crossed the tracks, an open-air trolley came rumbling over the hill.

"The motorman, Euclid Madden, saw the carriage cut suddenly across the track, and frantically tried to stop his car. Just as the two vehicles collided,

Donald Sims

Terminal bound, this flock of Pacific Electric cars is shown ready for the run into downtown Los Angeles.

Craig flung himself in front of the President. The carriage catapulted forty feet into the air, scattering its occupants all over the landscape.

"Roosevelt landed on a tree stump in a ditch, injuring his leg. But Craig had been ground to a pulp beneath the wheels of the trolley. White with rage, Teddy limped over to the motorman and demanded to know whether it was carelessness or deliberate murder. Crane, who had come through unscathed, managed to calm the President down.

"Insisting on continuing the tour despite his injury, the President left two days later for a Brotherhood of Locomotive Firemen's Convention at Chattanooga, Tenn. But his leg grew worse, and blood poisoning was threatened. The tour was halted at Indianapolis where an abcess was opened and the bone scraped—just in time, since the bone had become infected. Roosevelt subsequently recovered completely.

"Arrested and held on $5,000 bail, the motorman, Euclid Madden, and his conductor, James Kelley, appeared before Judge Joseph Tucker, who happened also to be president of the trolley line.

"And that's all of the story I can find. What happened to Madden? Were any new safety regulations imposed upon railways as the result? Maybe some of your readers know."

IRA SWETT, WEST COAST RAILFAN HISTORIAN, has come up with a 96-page publication, *Interurbans of Utah*. Profusely illustrated, the book gives the complete story in pictures of the five interurban lines that once operated in the Mormon State. It's hard to imagine anyone doing a more thorough job. Copies available from Mr. Swett, 1416 S. Westmoreland Ave., Los Angeles 6, Calif., at $2.00 each.

A very interesting history of the *Boston & Worcester Air Line* has been published by the Connecticut Valley Chapter of the NRHS. Written by the very prominent historian of New England traction lines, Osmund R. Cummings, this 50-page, well-illustrated booklet is something that most New England fans have been seeking for years. Few equipment photos of the B&W, one of the few interurban lines in the northeast, have previously been available, but Mr. Cummings has come up with a very fine assortment never heretofore assembled, as well as maps and complete rosters. The B&W right-of-way is now part of the main highway between Worcester and Boston, and remnants of the trolley line are still visible. Copies are available from Roger Borrup, Warehouse Point, Conn., at $1.10.

A full account of the thirty-three railway cars at the Seashore Electric Railway at Kennebunkport, Maine (first trolley museum in the United States), together with photos and a roster of equipment, is now available in a 28-page illustrated brochure issued at 55 cents each by NEERHS, 21 Carver Road, Newton Highlands 61, Mass. Incidentally, the Seashore line has recently acquired Cedar Rapids and Iowa City car 118, ex-Cincinnati & Lake Erie car, but it will remain on the CRANDIC property until 1955.

As far as we know, the only magazine regularly published by an organized group of employes of a long-defunct trolley line is *The Old Timer*, quarterly of The Valley Trolley Veterans Association, 829 State Street, Lemoyne, Pa. A group of railfans helped organize the group several years ago, and nearly all of the old trolley men of Valley Railways, abandoned 20 years ago, have joined up. The 8-page Spring, 1954, issue contains some very interesting photos of the Valley lines around Lemoyne, Pa.

MEXICO CITY'S 91 new PCC cars from the Twin City Lines are now in use on three routes. Since most of the lines downtown require loading from the left side, on center islands, center doors have been installed on all of them in the Mexico City shops. First routes to be PCC'ed were Obregon-Bucareli, Obregon-Insurgentes, and Valle lines. The Primavera line is next on the list, reports Luis Leon Torreabla, railfan from Mexico City. Plans call for modernization of most of the remaining tramway lines with PCC cars and trolley buses. There is a rumor that a hundred more PCC cars are being purchased from lines in the United States.

A few single-truckers remain in operation in Mexico City, mostly on short, suburban shuttle lines like route 4, Panteones, and route 22, Lerdo.

On the freight line connecting Mexico City's main market place, *La Merced*, with outlying markets, owners travel with their goods on trains usually consisting of a box freight motor and gondola. It's quite a sight apparently to see one of these trains coming in from distant Xochimilco in the early morning bearing people bringing in loads of flowers and other merchandise.

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CONVERSION of Baltimore Transit Company's route 14, North Bend-Rolling Road, as of September 19th, brought to an end one of the city's long, busy PCC car runs. Proposed widening of Edmonson Avenue, U. S. Highway 40, used by the route, forced the change to buses.

The Ellicott City shuttle line left isolated by the abandonment at the outer end of the line will continue to operate for a while since its four miles of private right-of-way can neither be paralleled nor replaced by any bus route. This line, incidentally, is the last passenger route in regular operation in the United States using deck-roofed cars. One operates as base service, a 5700, with thirteen windows, a semi-convertible nearly forty years of age.

Another U. S. line uses a deck-roofed car, but it's a private operation which carries employes of Milwaukee's Lakeside Power Works from the plant free of charge to the South Milwaukee bus line. Owned by Wisconsin Electric Power Company, the line's sole passenger car is No. 523, an ex-Milwaukee city car, to be replaced soon by a more modern car of the 800 series, reports Otto Goessl, 6959 Canal Boulevard, New Orleans, La.

Newest deck-roofed cars on the continent operate on Ottawa Transportation Commission lines in Ottawa, Ontario. Barely twenty years old, the roof types of these date back many years.

SOUTH'S LAST INTERURBAN, the Piedmont & Northern, went almost all diesel in August, with the conversion of the fifteen mile freight-only Charlotte-Gastonia, N. C., line to diesel. Strangely enough, a single small electric locomotive remains in operation on a short stretch of city track in Charlotte because company engineers felt it was not safe for diesels. Projected relocation of this track in the near future will wipe out the last of P&N electric power.

BOTH the Dallas Railway & Terminal Company and the Montreal Transportation Commission plan to convert their remaining trolley lines to buses by 1956 and 1961 respectively, we learn from J. V. Ecker, 2400 Grand Avenue, Des Moines 12, Iowa. Montreal operators apparently feel a large system can't be operated with equipment thirty-to-forty years old. But why choose stinkbuggies over modern railway equipment? Dallas abandonment plans included a statement by DRT president W. R. Burns: "No one in his right mind would go out and buy new streetcars now," whereupon the DRT offered 25 PCC's and 80 older cars for sale.

OLD PITTSBURGH STREETCAR came out of an eighteen year retirement last September. Car 4116, built in 1911 and retired about 1937 to duty as snow-scraper M455, was renovated in a style reminiscent of circus days of years ago. Its outside was painted white with fancy old-time decorations in red, blue, and gold. Its interior was decorated with balloons, seat covers, and carpet.

All this was part of publicity for a new radio show by Rege Cordic, popular entertainer on station KDKA. Cordic, dressed as a ringmaster, and many civic and newspaper leaders made the special run. Among the guests was Miss Gertrude Gordon, one time Pittsburgh newspaper woman who, years ago, traveled by trolley from Pittsburgh to St. Louis, writing a series of articles on her adventures, reports M. F. McGrew, Vice-President of the Pittsburgh Electric Railway Club, whose group made a special tour of the city the following day in old 4116.

THE WATERLOO, CEDAR FALLS & NORTHERN interurban line may be thrown to the stinkbuggies unless far more people patronize it, writes George Jungels, 843 Superior St., Aurora, Ill.

On a trip to Waterloo on the WCF&N, Mr. Jungels boarded car 102, a fine observation-platform job. The trip was beautiful, but only 16 or so passengers used the car during the entire run. At Waterloo, he took the Waverly car and found even fewer passengers. The crew told him it wasn't uncommon to run to Waverly without any passengers at all.

The WCF&N is one of the last remnants of what was once a very large group of interurban lines in its area, and may decide to give up passenger service at some time in the future without much prior publicity. Only recently a $500,000 fire destroyed the line's Waterloo roundhouse and shops. Lest you miss some unforgettable moments riding real interurban cars in the type of country that brought interurban service into being, you'd better make that trip as soon as possible.

THE LAST INTERURBANS

(Continued from page 43)

Grand River Railway and *Lake Erie & Northern* (70 miles). Substantially one line, these two roads interchange equipment. Talk of buses is heard, but meanwhile the road continues to operate electrically.

London & Port Stanley (45 miles). An electrified steam road, its application for abandonment may not be permitted on the northern end. Experimental diesel operation has been tried recently.

Montreal & Southern Counties (33 miles). Controlled by CNR and operated with much old equipment, the line should last a few more years, at least.

Niagara, St. Catharines & Toronto (18 miles). Last remnant of a large system, which—if there were any sense in things—would have been abandoned long ago.

A FEW other candidates for the interurban title should be mentioned.

Once an interurban, the *Key System* now runs only a few short lines across the two-mile Bay Bridge and wants to give up all trans-Bay service.

Too short to be an interurban, *Sand Springs Railway* in Oklahoma, using cars from abandoned interurban lines, is really a city operation (Tulsa's city limits adjoin Sand Springs).

Pittsburgh Railways, operating mainly in urban areas, despite a fairly long run to Library, Pa., has lost its interurban character.

Shaker Heights Rapid Transit, operating entirely in an urban and suburban area, is what the interurbans would have been had they used foresight. Laid out by the Van Sweringen brothers to give transportation to their planned suburban real estate community, this setup later got into downtown Cleveland through its subway.

As the years pass, electric transit, both local and interurban, is becoming more desperately needed. Under the onslaught of the motor car, local transportation is in serious danger of breaking down altogether. Meanwhile, the interurbans are passing into limbo.

No doubt, for many years yet, there will still be some remnants of the glory that descended. There is some satisfaction in that. ●

TRUE TALE

TRAIN-ORDER SLIP-UP

by Harry Hiller

IT WAS ONLY SEVEN in the morning, but already it was hot enough to melt a man down to the next size smaller. I broke out into a sweat just climbing the steps to the Los Angeles & Salt Lake's interlocking tower at Ontario, California.

"I'll bet you wish you were working nights again," Red Adkins, the night op, said. "She's gonna be a scorcher. The Ole Pedro'll be lucky if it doesn't get a few kinked rails before the day is over." Ole Pedro was our nickname for the railroad, now a part of the Union Pacific.

I tossed my hat on the telegraph table and signed the transfer. "I'm liable to get a kink myself adjusting quadrants if those signal wires expand too much."

Red grinned, and nodded. The super was nutty about maintaining a perfect 90 degree angle on our signal boards.

"See you in church," Red said.

"S'long," I said.

I picked up the form 31 work order on the table, signed "JAD." It read:

ORDER NO 34 TO ENG 25 AND TO EASTWARD EXTRA TRAINS. ENG 25 WORK EXTRA SIX FORTY FIVE 6.45 AM UNTIL FIVE FORTY FIVE 5.45 PM BETWEEN ONTARIO TOWER AND PEDLEY NOT PROTECTING AGAINST EXTRA TRAINS.

I fastened it with a clip to the eastward train-order signal. It was the usual stuff. I'd been delivering similar orders every morning for the past three months to crews hauling heavy granite boulders from a quarry on a spur north of Pedley station over a portion of the high iron and into the Pedley yards. There some westward train picked them up and dragged them into San Pedro for a breakwater just outside the harbor.

When an eastbound train approached Ontario tower in those days, the usual practice was for the telegraph operator to notify the dispatcher, who gave him the names of its engineer and conductor. These the op entered on the 31 order, wired the names back, and got a complete with the time. All he had to do then was put the order in a hoop and hand it up without delaying the train. It was a bad practice, but it saved a lot of time and shoe leather, for all the conductor on the rear had to do was grab the hoop and swing a high-ball to the hogger.

Red was right about the heat. Excessive expansion in the wires threw out all the signals. In a couple of hours they had sagged almost into the caution position. I had to go downstairs and make adjustments.

I had been working on them a while when I heard somebody climbing the stairs outside. A large sign at the foot of the stairs read: NO ADMITTANCE—EMPLOYES ONLY, so I knew it had to be Maggie, my best girl. I yelled, "I'll be up in a moment."

Maggie told me to take my time.

I tried to hurry anyway, but it only made me clumsier. I was young then, and I hadn't seen Maggie in at least twelve hours. When I finally finished, I ran up the steps two at a time. There she was, leaning against lever 13. Levers 13 and 17 controlled the derails on the SP Chino branch between Ontario and Pomona. They were closed. I had passed an SP train over a short time before and, what with the sagging signals, hadn't got around to opening them again.

As I shut the door, Maggie came over to say hello. But I'd barely got my arms around her when I heard four sharp blasts of a locomotive whistle and an eastbound extra came bear-

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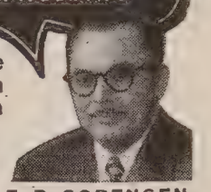

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ing down on my open Pedro derails fast enough to scatter itself all over Ontario if I didn't close them in time.

I PUSHED MAGGIE roughly away from lever 13 and—*Click-Wham!*—shoved it ahead so violently that the whole tower shook. *Click-Wham!*—lever 17 followed. With these moves, the SP derails were open as they should have been if I had followed the rules and regulations. I pulled back 23 controlling the west Pedro derail, and got it over just before the pony trucks hit the detector bars. Lever 27 followed. In my excitement I grabbed the train order lever and gave them a clear board. It was pretty quick work.

As the extra roared past with the usual clickety-clack and rattle-and-bang of worn-out cross-overs, the hogger and tallow stood in the gangway holding their hands clasped high over their heads in a handshake of congratulations. Catching sight of Maggie, they started throwing her kisses. Maggie, having realized by then that I had prevented a bad accident, was as excited as I was.

"What's the matter with those crazy guys?" she said.

I grinned at her: "Guess they always expect to have a clear right-of-way. There isn't much business on the Espee, and they figure they can get the track in split seconds. Good thing I'm a fast worker."

I was in a rosy glow by this time. Right in front of my best girl I had saved property and maybe life as well! Maggie was beaming at me, my heart was pounding, and I had trouble breathing.

That was when I realized that the train-order signal was in the proceed position.

"What's the matter, Harry?" Maggie said.

Cold sweat had broken out all over me, and I was shaking.

"Harry, what's the matter with you?" she said.

I didn't have the breath to answer. I kept seeing the last line of that train order: NOT PROTECTING AGAINST EXTRA TRAINS. I had let an extra eastbound train into the working limits of the work train without giving them that order.

At last I managed to say, "It's nothing. My stomach giving me trouble again."

I had to get her out of that tower. I couldn't let her know what I had done.

"Maggie," I said, "go get Red Adkins to come finish my trick. I'm too sick."

Next Month's Waybill

CAB-IN-FRONTERS: David L. Joslyn tells the detailed story of this distinctive breed of Southern Pacific steam engines, with many choice photos

TWO ROSTERS: SP cab-in-fronters and the Pacific Great Eastern

WHEN THE CLOCK STRIKES TWELVE, rail-fiction story by E. S. Dellinger

ELECTRONIC YARDMASTER (Union Pacific)

CNR'S ONLY GIRL OPERATOR

ONE-MAN RAILROAD, by William Gilman

PLUS True Tales, Photos of the Month, Plywood Empire Route, a full consist of popular departments, and a beautiful Ektachrome cover showing a New York Central retarder tower.

She clattered down the stairway, and after she had gone, I read order No. 34 again.

The smash-up would be horrible when that speed-happy hogger on extra 65 east hit the work extra on the main line with the first cut of flat cars loaded with granite.

I was panic-stricken. There was a law against such carelessness as mine. I could spend from five to twenty years behind bars. I thought of making a quick getaway, dashing out of that tower and heading for Mexico or the Foreign Legion—any place to escape the investigation that would send me to jail. And Maggie—I couldn't bear to show her my guilty face again. I was no better than a murderer.

Just then Jimmie Day, the dispatcher, started calling me. It was a hundred in the shade, but I was as cold as a reefer in summer. I reached for the key.

This was it. This was the time to start for the tall uncut. My hand shook so badly that I couldn't open the key lever to answer. By grabbing my left hand firmly with my right, I managed to stutter, "Extra 65—east."

Old Jimmie came right back: "Barnes, conductor; Jones, engineer." I could hardly believe my ears. "Complete 10:40 AM. JAD." I sat there hardly breathing. "When you hand it up," Jimmie said, "put him by at 10:40. He's running too damned fast for his schedule."

I felt a wave of relief again. He didn't know I hadn't delivered that order. In a minute or two I reported at 10:40 as instructed. Now I glued myself to the wire. Every second I expected to hear that brassy sounder telling Jimmie that extra 65 east had piled into the work train and the big hook and doctors were needed. Years later, or so it seemed—the clock said only twenty minutes—I heard the most beautiful sound I ever expect to hear in my life.

"Extra 65 east coming fast," clicked Pedley.

"Let him go," came back Jimmie. "Where's that work train?"

"Still at the quarry. Expect him any time now."

"Must have been delayed with his first cut."

"Yes," came back Pedley. "He pulled a drawbar starting out this morning. Throwing that flat out delayed him thirty minutes."

Thirty minutes. The miracle had happened. If that drawbar hadn't pulled, the work train would have been on the high iron in the path of extra 65 east.

A COUPLE HOURS LATER the city phone rang, and I gave a guilty start. It was long distance. Somehow the big brass must have discovered my mistake.

"Hello," I said.

The answer was unexpected.

"This is Jones, hogger on extra 65 east. You won't report me for coming into your interlocker like a wild Indian, will you Harry?"

I nearly collapsed with relief.

"Why should I? I'll let it go this time, Jonsey, but next time I'll put you on the ground."

"Thanks, pal," Jones said. "The tallow and I were chewing the fat over the boiler head, and I was into you before I knew where I was at. I'll not forget you, Harry."

He hung up. I felt better. Jones had no idea that any work train had been within a hundred miles of Pedley, and I hoped he'd never find out. He was an old rail, and the chances were he wouldn't have said anything anyway, but I still felt relieved.

Maggie didn't have any luck finding Red, the night op. I knew she wouldn't. Red had gone to Riverside for a good time and wouldn't be back before seven. But Maggie showed up around noon lugging a large basket filled with steaming home-cooked grub.

"Gee, what happened?" she said when she saw I was myself again.

"I found some medicine," I said. "Did me a lot of good."

"What you need for that stomach is the right kind of eats," Maggie said with a grin.

"And how," I said.

After I'd finished the last crumb and licked my lips as if I could eat some more, I looked at her a few minutes, and said, "How'd you like to take care of my stomach for the rest of my life?"

Maggie blushed a rose red and said, "Oh, Harry . . . ."

A few days later as I was walking past one of the best shoe stores in Ontario the boss called me in and fitted me with a pair of his highest-priced shoes. He wouldn't tell me who paid for them, but he hinted that they'd come from a couple of my railroad friends. ●

Books of the Rails

FROM MINE TO MARKET: The History of Coal Transportation on the Norfolk & Western Railway; by Joseph T. Lambie, New York University Press, New York, 380 pages, $6.

FROM THE BEGINNING when it first hitched its hoppers to the black stars of the Pocahontas coal fields, the Norfolk & Western has been a specialized railroad whose prosperity depends on an immense volume of coal traffic. *From Mine to Market* is the story of that traffic and the part it plays in the road which is still largely the shadow of one man, Frederick J. Kimball, for many years its president, receiver, and board chairman.

If Kimball did not quite create the Norfolk & Western, he was at least responsible for its present status. From the start, he saw its potential as a coal carrier and expanded its lines north, south, and west to tap one mining field after another.

The 200-mile extension to Ohio, for instance, may have seemed visionary at the time, may even have forced the road into a temporary receivership during the depression of the 90's. But it was this same extension which—after Rogers had ramrodded the Virginian into being and after the tidewater competition of its more powerful northern rivals had left the road sputtering for revenue—enabled the N&W to reach an additional market in the West with the output of its mines.

As an agent for coal producers, N&W has faced some peculiarly difficult problems, ranging from the fair distribution of coal cars during a crisis to the establishment of its independent status before the ICC. It also had to struggle to retain its place in the bituminous fuel market, in the end turning its prevailing eastward flow of traffic westward to the Great Lakes and the Midwest.

HURRICANE ROAD, by Nora K. Smiley and Louise V. White, Exposition Press, New York, 148 pages, $3.

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Key West, was one of the great achievements of modern engineering. In *Hurricane Road* it is also a test of man's endurance.

The tropical hurricanes which periodically wrecked the line and led to its conversion in 1938 to a motor highway were not its only troubles. Forest fires devastated the islands; high tides and treacherous currents tugged at trestles and fills; and alcohol, swindlers, and prostitutes demoralized the work crews. Besides, Key West did its best to keep the railroad from getting there at all. The job took nearly ten years, but finally, in 1912, Flagler's dream reached railhead in Key West only a few months before Flagler himself died. A railroader had made history in the conquest of the sea.

Hurricane Road lacks imaginative force; most of the time, it doesn't seem very real. To make things worse, the authors moralize unduly about the poor men infested with lice, liquor, and lust. But the drama of the railroad is powerful enough, now and then, to transcend the corn that surrounds it.

COLLECTIVE BARGAINING IN THE RAILROAD INDUSTRY, by Jacob J. Kaufman, King's Crown Press, Columbia University, New York, 235 pages, $3.75.

A PROVOCATIVE and controversial study of railroad labor relations during the past 25 years, Mr. Kaufman's book indicates that the much-praised Railway Labor Act has been a failure. Some of the factors responsible, he feels, are the Interstate Commerce Commission's control of rates, the Presidential seizures of the entire industry, and, consequently, the breakdown of collective bargaining procedures. No union can bargain effectively when the threat of Presidential seizure annuls the weapon of the strike, just as no railroad needs to bargain. To this impasse, Mr. Kaufman offers a number of startling solutions.

TRAINS AND THE MEN WHO RUN THEM, by Alexander Uhl, Public Affairs Institute, 312 Pennsylvania Ave., S.E., Washington, D. C., 100 pages, paperbound, 50 cents.

WELL WORTH reading, this book is a history of the railroad labor movement in the United States told against the background of its glamorous past and its dieselized present. Though clearly pro-labor, the book is by no means dogmatic. The industry's financial and technological—as well as labor—problems are clearly examined in detail.

Incidentally, Mr. Uhl comes up with a tradition-shattering discovery: an engine built by John Fitch before his death in 1798, long thought to be an early steamboat model, may well turn out to be a locomotive engine.

THE FRIENDLY SOO; by Leslie V. Suprey, Friendly Soo Publishing Co., Box 54, Leonard, Minn., 25 pages, $1.50.

A SOO LINE AGENT, Mr. Suprey has compiled a 10x14 album of Soo Line photos ranging from the road's first American-type engine, built in 1884, to its latest 3-unit EMD diesel. Though the photos are more prose than poetry and perhaps less well reproduced than you might wish, they give you a pretty good idea of the Soo's equipment and the country it serves.

GAS-TURBINES *(Continued from page 37)*

steam it took almost three hours from the time an engine came over the pit until it was ready to go again. But we can service a turbine properly in forty-five minutes. Under pressure we've been known to do it in twenty."

I decided to look up some of the other people who work closely day after day with the gas-turbines. Leonard P. Zeiler and Ross C. Hill of the four-man gas-turbine maintenance staff dispelled any doubts I might still have about them.

The gas-turbine has really been making good on the Union Pacific. Now operating in the regular pool with no special mercy from the dispatcher, they are given all the duty that traffic will permit. When it comes to that highly prized locomotive quality, availability, the Big Blow may have even a slight edge on the diesel. But nobody on the road is going to be satisfied until the turbines reach 100 percent.

Already they've demonstrated their flexibility. Though not intended for passenger service, on at least one occasion, a gas-turbine pulled in a streamlined passenger train after the diesel engine broke down, and, though they weren't designed for multiple-unit operation either, they have sometimes been double-headed, even through mile-long tunnels where recirculation of exhaust gases might be a problem. Deflectors have been mounted to direct the exhaust gases at a 30 degree angle toward the rear. Once, as the result of a defective drawbar, a gas-turbine was operated backward through a tunnel without difficulty.

But experimentation is no where near ended. In an attempt to find the most economical fuel possible, No. 57, which I rode in on from Rawlins, had been converted briefly to propane. The experiment was a technical success—there was less wear on the turbine blades. But the propane required extra safety precautions which offset any other advantages, and 57 returned again to Bunker C fuel.

Combustion chamber life has been extended since the first units were put into operation, and experimentation continues. They are trying out different kinds of combustion chambers in the hope that fuel specifications can be relaxed and an even cheaper fuel used.

A GE inspection instrument, the Boroscope, permits inspection of all interior surfaces of combustion chambers through a small hole in the side of each one, reducing greatly unnecessary tearing down and making it easier to check assembly work after it has been completed. Actual operation indicates the life of combustion chamber liners will be extended from 400 to 1200 to 1500 hours.

There are already several marked differences between the first group of gas-turbine engines and the second. Most conspicuous is the external access doors, like those on GP-9's, which permit servicing from an external walkway. In earlier units, the space between turbine and wall was a little narrow for a heavily built man. The new arrangement provides greater safety as well as better access. An AC auxiliary generator now runs the auxiliaries with a motor-generator set where DC is required. Changes have been made in the oil filter system, and hostling is now done on No. 3 rather than No. 4 motor.

I WAS TO RETURN to Rawlins on No. X-64, which had been assigned to a freight train leaving around three o'clock. I met her engineer, John, and her fireman by the locomotive ready track, and we climbed aboard and looked her over. The fireman opened the panel doors on the outside walkway for inspection.

The auxiliary diesel generator was running already. Toward the west we could see our train pulled by three GP-9's coming around the curve into Green River. Our diesel auxiliary grew louder, and we started toward the east end of the yards where we were to pick up the train.

After coupling on, it was time to fire the turbine. It is cranked by the generator acting as a motor driven by the auxiliary diesel. The pitch of the whine goes higher and higher, just as early-day aircraft inertia starters did, until it reaches a peak. Then, as the fuel hits the combustion chambers, there is a big roar. The brakes are tested, the brakeman climbs aboard, the throttle is eased back into the third notch, and the train starts to roll out of the yards. We had 5100 tons of lumber and fruit behind us which had come in from the Oregon Short Line. The time was 3:10 P.M., the afternoon sun was behind us, and there were a few clouds in a bright blue sky.

As we passed through Wamsutter, we ran into a snowstorm which cut visibility way down. The temperature dropped, and the cab heaters felt very good. But snow in June is nothing unusual in Wyoming. As we started the long climb to Creston, the grade began to slow us down.

"We're getting a break on this," John said. "The cool air means more power, and that snow and rain acts like water injection according to the GE engineers. It's like the smoother way your car runs on a cool summer evening when the dew is on."

As we continued to climb, the speedometer read between 18 and 24 miles an hour. The throttle was wide open to the twentieth notch, but there was no feeling of strain, just one of power.

"The disadvantage of these turbines, is that they slip on wet track if you don't watch them closely," John said, delicately manipulating the sander valve, as the slip indicator flashed occasionally.

At last we topped the grade at Creston and started down grade towards Rawlins. It was smooth going. The ride heightened my admiration for gas-turbine locomotives.

"You can't beat these turbines on a grade like this," John said. "I followed one out of Green River once in a three-unit diesel when I knew the turbine had more tonnage than we did, yet she just walked away from us. Same thing happened another time with a thirty-nine hundred."

"The turbines aren't slower than steam then," I said, "in moving trains, like some people say."

"Before you can say they are slower," he said, "you'd better get both steam and turbines operating under the same limitations. You'll notice I occasionally use the brake to hold down my speed. In the old days, once we topped the grade at Creston we could let a steam locomotive roll down into Rawlins. You can't do that with these, or with the diesels either, for the overspeed trips get you. Put overspeed trips on steam locomotives, and these will beat them in getting a train over the road any time."

The afternoon sun was low in the west as we pulled into Rawlins. The new crew was waiting for us and climbed aboard to take the X-64 on into Laramie. We climbed down and a few minutes later the train pulled out of town with a roar and headed towards Elk Mountain, now bathed in the gold of the setting sun.

"When they get the bugs out of them," John said with admiration, "you won't be able to get near them with anything else. They're faster on level ground, go right up a grade, and you handle only one unit instead of three. I miss the old steam locomotives, but I certainly wouldn't want to go back to them. When I wear out these old overalls, I'm replacing them with the coveralls they wear on the streamlined passenger trains. I really like these turbines." He started off then. "See you later, Les. Maybe next time we'll be giving you a ride in an atomic-powered engine."

"You never can tell," I said. ●

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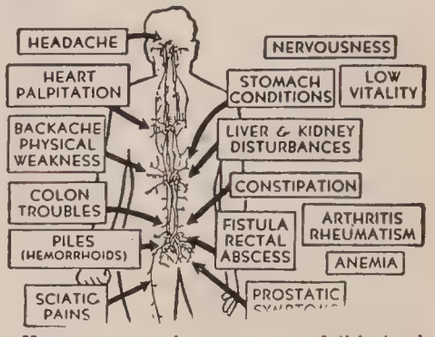

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TRAVELING GRUNT

(Continued from page 33)

"What he means," Jess Carter said, wincing with the pain of his broken arm, "you don't have just one wreck. You got to have three. Some guys have a pet jinx riding with them."

Bud Slattery's eyes were mean. "You rode with Sim Novak, mister," he said, "and you walked away. And you rode the crummy tonight." He heaved himself erect. "You've got a jinx on your shoulder, mister. Stay off my engine," and strode away. Hank took a step after him, his face white in the glare.

"Hank," Jud Madigan said, "you're all we got left. Clean up this mess."

The whine of an ambulance came faintly through the night. Hank's mouth was set in a half-grin.

"Yes, sir," he said. "It'll take"—his eyes roved over the mess—derrick, trestle, caboose, and he decided—"seventy-three hours, outside," and strode away toward the creek.

IT WAS QUITE A THING. With Jud Madigan trussed up in Two Rivers hospital raising thunder to know what was going on, with District Headquarters sending page-long telegrams about how to build bridges and influence creeks, with the Big Man demanding to know when the main drag would be open, Hank Dulin put the railroad back together again.

By the time the traveling grunt got his arm back from the doctors, things were pretty well in hand. By this time Hank's eyes were red as marker lights, he was caked with swamp slime and reeling with weariness, but to Jess he didn't look unhappy.

Seventy-one hours and twenty-two minutes after Old Bessie had dunked herself, Hank picked up the portable telephone and said to the dispatcher at Two Rivers, "Eleven-ten Pee-Em—let 'em come," cradled the phone, waved so-long to Jess, and swaggered off triumphantly toward the highway.

The next day when Hank and Jess walked into the superintendent's hospital room, Jud had one leg hoisted high in a pulleyed contraption. Hank walked over and stuck out a big hand.

"You're looking good, cap," he said. "Just thought I'd drop by and see what you wanted done."

Jud's eyes were cold, and the grin faded from the big kid's face.

"First," the superintendent said, very formally. "The job you did at Stinkin' Creek was magnificent. I am instructed"—there was a faint emphasis on the word—"to commend you for it."

Hank looked confused and started to say, "I just did what—what—"

"That wreck," the superintendent cut in, "tied this division up longer than any accident in history. I want to know why."

"Why? Why, the derrick line wasn't secured. I told the foreman—"

"Exactly," Jud Madigan said drily. "You *told* somebody. It wasn't big enough to do yourself, or see that it got done. It would have taken maybe three minutes. Instead—"

He picked up his pipe, lighted it, smoked in silence for a long time.

"You see, son," he said, "your job at Stinkin' Creek made a name for you. But because you didn't think a little thing was important, the big thing happened. I'm relieving you of your trainmaster duties. Jess here will take over the crews."

"Then I'm fired?" Hank asked tonelessly.

"Not unless you want it that way. We need a car service inspector."

"Thanks," Hank said. "But I'll just quit."

The superintendent shrugged. "You played a lot of backfield at State, I hear. Ever get smeared for a loss?"

Hank's grin was wan. "Sure, lots of times. But I didn't get booted out of the stadium for it."

Hank stood at the window overlooking the yards. A diesel pulled in from the south, the rumble of it shook the building. Hank stood there a long time while Jud's pipe fogged up the room.

"All right," Hank said finally without turning. "I'd like to stay."

Jud Madigan knocked the ashes out of his pipe. "Jess," he said, "suppose you take Hank over to Ma Gannon's and buy him a steak. On me."

SLATTERY WAS PRETTY HAPPY about it, when the word hit the division. He had been talked about for the trainmaster spot until Hank came.

One afternoon he was sounding off in the engineer's washroom when Hank walked in, dog-tired from chasing cars all day.

"Well, well," Bud bellowed, "Mister Jinx. How's it feel to get fired, pal?"

For a moment hell four feet deep flew into Hank, but he grinned, unclenched his big hands, and went over to the wash-fountain. Bud dropped an oversized hand on his shoulder, spun him around.

"Look, mister," he growled, "you ain't so big you can't speak when you're spoken to civil. This place ain't for pencil pushers, nohow. Get out."

Jess Carter walked in then, just as Hank's face went white, but a traveling grunt kept out of things that didn't concern him. Bud thrust his jaw forward invitingly.

"Unless," he said, inches from Hank's nose, "you think I ain't man enough to throw you out."

Hank moved forward on the balls of his feet. But nothing happened. He dropped his hands suddenly, and his voice went very quiet.

"Sorry," he said. "I was out of line."

Slattery straightened. "All right," he said, disappointment all over his face. "Get out. And stay away."

For a moment Hank Dulin stood looking thoughtfully at his knuckles. Without a word he walked out. Jess wanted to follow him. But there was something in the slump of the kid's shoulders that said not to.

The winter rains came then, the snow, the sleet, the ice; a howling blizzard pounced on the Two Rivers Division the same day the news hit the wires. A red-ball special, fifteen sealed express cars, hush-hush stuff for the desert, already eating up the miles toward the division, on a paper schedule set up by the XYZ boys in the Big Office that didn't ease up those hair-raising curves and grades and fills of the division in February one little bit.

Jud Madigan howled as Jess Carter read him the transportation notice. "You call that a schedule?" he bawled. "In this weather? It can't be done."

Jess Carter grinned. It meant pull-

ing two 1500-horsepower diesels off a passenger run, and snarling the division for eleven hours. But it could be done. Jud finally got around to admitting it himself.

"All right," he said, "who you got for the run—Casey Jones?"

"Nope," the traveling grunt said, "Bud Slattery. First out on the board."

Jud nodded.

"All right, call me from Plains City—if you get there." A wistful note crept into his voice. "Say, Jess, you seen Hank lately? You think I was too tough on the kid? I just wanted to make him think. But he ain't been around."

Jess Carter walked out on him. He was remembering the way Hank Dulin had looked that day in the washroom.

The word was out from the Big Office that the special was to hit Plains City on schedule, or else. So when the sleek train came booming into Two Rivers, Jess had two E-8's, 4140 and 4141, back to back and ready, their green-and-gold already glistening with sleet and ice. Bud Slattery swaggered up to Jess for his orders.

"Rights over everything but this blizzard, Bud," he said. "Saw-by thirty-two at Bear Creek."

Bud bawled something at him, flung his grip into the cab, and mounted the ladder. Jess was about to follow, plaster-encased arm and all, when somebody pulled his coat.

"I've got to go to Plains City, Mr. Carter," Hank Dulin said. "How's about a ride with you."

Bud Slattery's howl nearly stopped the diesels.

"Blast it, no!" he bellowed. "No jinx is putting a hex on this run. He goes, I stay. That's flat, mister."

Jess wanted to boot the bull-headed hogger right off the right-of-way, but there wasn't time for that. Hank was staring at Bud, then silently he turned and plodded off into the night. Slattery's laugh followed him.

The holding signal changed, the clattering roar of the diesels rose to a thundering crescendo, and the train shook itself loose and began to move. Jess Carter hauled himself painfully up the icy ladder, settled into the fireman's seat, and watched the white streaks of snow zipping toward them in the brilliant white beam from the Mars headlight.

THE SPECIAL had just about topped the steep grade of Thunder Ridge when the red alarm light went up and the bell clanged. The fireman groaned as he heaved himself out of his comfortable chair. "Dam' shutter stuck," he said.

Jess followed him back into the 4141, the second of the two units, and jarred the shutter loose, then wandered on back into the dark silent cab at the end of the unit.

A tall figure uncoiled itself from one of the upholstered chairs. Hank Dulin.

"Stowaway, eh?" Jess said. "Okay, but stay put. Bud'll throw you off personal if he finds out."

The diesels were laboring mightily up the last few rail-lengths of the ridge. Then the tone of the engines changed, and he knew they were over.

With a jarring thump, the brakes went down. Jess grabbed frantically for something, anything, but there wasn't holding-room, and he was flung against the cab bulkhead, and held there. Hank went backward out of his chair, slamming into the wall between the cab and the engine room. The train slid to a shrieking stop, and Jess clawed the cab door open, leaned out, and looked ahead.

Steam billowed from a parted metal connector, and air was whooshing from the train and the signal-line hose. Through the hissing snow, Jess saw that the lead unit was gone. For an instant there was the whipping flash of the 4140's Mars light against the clouds, then only the darkness of the blizzard-driven night.

He swallowed hard. The third thing—the thing that couldn't happen. A diesel loose on a seven-mile grade, out of control, heading into 32, the Coast Limited. With 32 holding the main track expecting to saw-by at Bear Creek—

Hank shoved him aside, slid to the ground, and ran forward. The roar of the steam and air died, and he was back.

"Jess!" he shouted. "We'll go after him. We've got time."

The fireman tumbled out the side

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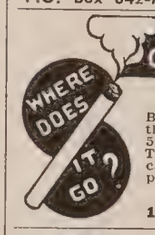

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door of the unit. "Okay, mister," he said, "I'll cut you loose. But I ain't ridin'. Not with no jinx. Highball!"

Swiftly he cut the signal and air lines, knocked the steam line clamps free, and lifted the cut-lever. Jess cut in his controls, slammed the unit into reverse, and notched out gingerly, leaning from the window, with the icy snow cutting into his face. The diesels howled, the 4141 backed swiftly, gathered speed, and headed down the dizzy seven-mile grade.

Already the blocks were green. Bud Slattery was a long way ahead. Jess widened on the stubby throttle, and the roar of the motors rose to a whine.

"Give her the gun, Jess," Hank called over the thuttering roar. "I'll go up and see if that knuckle's open. May have to hit her a little."

Jess widened on the throttle, and the 4141 heeled far over as her flanges squealed in protest against the high rail of a hair-pin turn. They were perilously close to overturning speed now, but they were gaining. A block zipped toward them. Yellow. Another. Then a red block. It wouldn't be long now. Jess closed his fingers over the brass brake handle, just in case.

With a savage *br-r-o-o-mm!* the diesel hurtled over the little open-deck trestle at the foot of the Ridge—Big Run. Bear Creek was a mile away.

Just then Jess saw the *whish-whish* of a Mars light against the sky across the valley. The *Coast Limited.* He wanted to be sick. They'd be meeting Bud just beyond the station.

He strained his eyes ahead, and there it was, the square end of a diesel. A hundred yards away. Fifty. Frantically, Jess shoved against the throttle, but it was already in the eighth notch. There wasn't any more.

Twenty yards. Ten. Five. Jess felt the faint shudder as the jaws of the coupler touched. Just a little more.

The single engine of the 4141 coughed like an asthmatic goat, the unit checked abruptly, and the terrific speed slackened. Jess' shouted curse was ripped from his lips by the tearing wind. A ground relay—a simple little ground relay—had kicked out. Their power was gone. The 4140 moved away, swallowed up in the night.

Dully, Jess braked the 4141 to a stop, went down to reset the ground relay, and walked back to the other end of the unit where Hank would be, but Hank was gone.

Jess closed his eyes. It was pretty clear. Realizing at the last moment what was happening, Hank had tried to leap the gap between the units—a jump no man could make on such a night. Somewhere on the ridge they'd find what was left of him.

Jess opened the side door, looked up at the sky. A sound came floating back through the snow and sleet. The chime of a diesel horn. *Whoooooo! Whu! Whu! Whu!*

Jess slumped against the wall, sick with relief. Hank Dulin. Cockily blowing back a flag. The third thing hadn't happened after all.

FOR THREE DAYS the argument raged. It couldn't happen, and the brass had the blue prints and diagrams to prove it. Impossible, the diesel boys yelled, and came up with more charts and manuals and case-histories. All Hank Dulin could say was, "I was beginning to believe the third thing would happen myself. I believed it even then, when I knew we weren't going to hit the *Limited.*"

In his hospital room, Jud Madigan listened to all they had to say, and then jerked his head at Billy Williams, his wizened little stenographer, and began to dictate. When an hour later the last word had died away, the room went very still.

Bud Slattery, his right arm in a cast, said humbly, "Mister Jud, would you have your stenographer read that last part—I didn't quite—"

Jud nodded, and the secretary cleared his throat.

" 'When units 4140 and 4141 parted,' " he read in his high-pitched voice, " 'the Extra was at the crest of the Ridge. Apparently the lock pin did not drop when the coupling was made at Two Rivers roundhouse, and when slack action occurred at the top of the Ridge the coupling parted.

" 'When the brakes went down,' " the man went on, " 'the main reservoir pipe on the 4140 was broken, exhausting main reservoir and control air pressure. Engineer Slattery, to get away from his train, held the engine brake off, exhausting the remainder of his air. Then, when he attempted to brake, he was unable to do so. He became confused, and in attempting to jump from the unit, his arm was caught beneath the hand-rail of the unit, holding him helpless.

" 'Road Foreman of Engines Carter and Car Service Inspector Dulin, who were riding in the cab of the second unit, detached it from the train, overtook unit 4140, and brought it to a stop just east of the Bear Creek depot. Appropriate action has been taken to prevent a recurrence.' "

Slattery shuffled his feet. "But, cap," he said pleadingly to Hank, "how'd you get on board? How'd you stop it?"

"Simple, Bud," Jud said. "Hank just waited until the coupling was about made, stepped over onto the 4140, walked up to the cab, and slung a little muscle against the hand brake. Fortunately it worked. It was a little thing, Bud. But you forgot it. You forgot you had a hand brake. And it'll take me five months and twenty-nine days to forget it too, and put you back to work."

"Skipper,"—Hank's voice was as cocky as ever, but there was something else in it, now—"I think thirty brownies ought to be enough. Forget about the six months. Hoggers like Slattery are scarce."

"So?" Jud said mildly. "And what's a wet-eared car chaser got to say about it?"

"Not a damn' thing, boss," Hank replied, grinning. "But you don't boot a guy out of the stadium just for getting thrown for a loss, do you?"

Jud Madigan grinned back.

"All right, youngster," he said. "From here on out, Slattery's your problem. As of now, you've got the crews back. And please," he said, drawing the covers up to his chin and putting his hands behind his head, "don't foul up this railroad any worse than it already is. That means you, Mister Trainmaster. Now get out, all of you, and let an old man sleep."

He winked at Jess. The traveling grunt turned away. He didn't want to see a trainmaster bawl, but that was just what was going to happen. ●

George C. Corey, Rail Photo Service

Down Georgia way, the 19-8 mile Wadley Southern still uses steam power on its mixed freight-passenger train. Tall-stacked girl is No. 53.

MAIL CAR

(Continued from page 9)

CLERGY of many faiths follow railroad hobbies. Among them is the Rev. Carroll D. Trip, an officer of the Vermont Baptist State Convention, 189 S. Winooski Ave., Burlington, Vt., who writes:

"As a staunch railfan, I have been reading *Railroad Magazine* for about eight years, and I wish there were more of it. I like your present format very much and am glad you dropped some objectionable ads when you graduated from the smaller-size magazine." •

A SALUTE to *Railroad* for recognizing Kate Shelley with a full-page picture (Oct. issue)!" says Fred G. Hanson, administrative editor, *The Conductor & Brakeman,* 419 ORCB Bldg., Cedar Rapids, Iowa. "However, the Order of Railway Conductors & Brakemen will not place a plaque on her grave until the 75th anniversary of her brave deed in saving a train, July 6, 1956.

"This marker, as designed by Karl R. Rittman, will bear the image of the lantern Kate carried that wild stormy night. Probably its base will be a boulder from the old Des Moines River bridge." •

MASCOT of Reading Terminal, Philadelphia, is Charlie, a female tiger cat that Trainman Charles A. Davis picked up out of a mud puddle shortly after 2 A.M. on a rainy August day in 1950. Despite the hour and the prospects of bed after an all-night shift, states the *Reading Railroad Magazine,* Davis rescued the starving Charlie and took her to the trainmen's room in Reading Terminal for a dish of warm milk.

From the first, Charlie (named for her rescuer) thrived and has become a full-time resident of both the trainmen's and conductors' rooms. When No. 6 is due from Reading, or No. 312 from Bethlehem, or many another train, Charlie stands atop the stairs to greet the crew—and at the right time, too. "She knows the train schedules as well as the dispatcher," comments a veteran conductor. Or it may be that she greets the crews of trains which bring her choice tidbits such as liver, beef, milk, and catnip.

On one occasion she required hospitalization. Worried railroaders passed the hat to finance her treatment, and when she was discharged from the hospital they erected a large banner which proclaimed, "Welcome Home, Charlie!" •

FIREMAN R. L. Kirkbride, 10606 San Pablo Ave., El Cerrito, Calif., tells us about Engineer Bill Esser's sudden death recently at the throttle of a Southern Pacific freight hog crossing Suisin bridge. Bill's fireman, Robert Proctor, took charge and ran the train to Martinez, Calif. It was a strange and almost incredible repetition of history.

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Back on July 20, 1939, while Bill was firing the *Overland Limited* for an engineer named A. P. DeBock and they were speeding through Pinola, Calif., the hogger collapsed at the throttle. Shoving over to the right-hand side, Bill grabbed the throttle and piloted the train into Martinez—yes, Martinez—thus averting a possible disaster. •

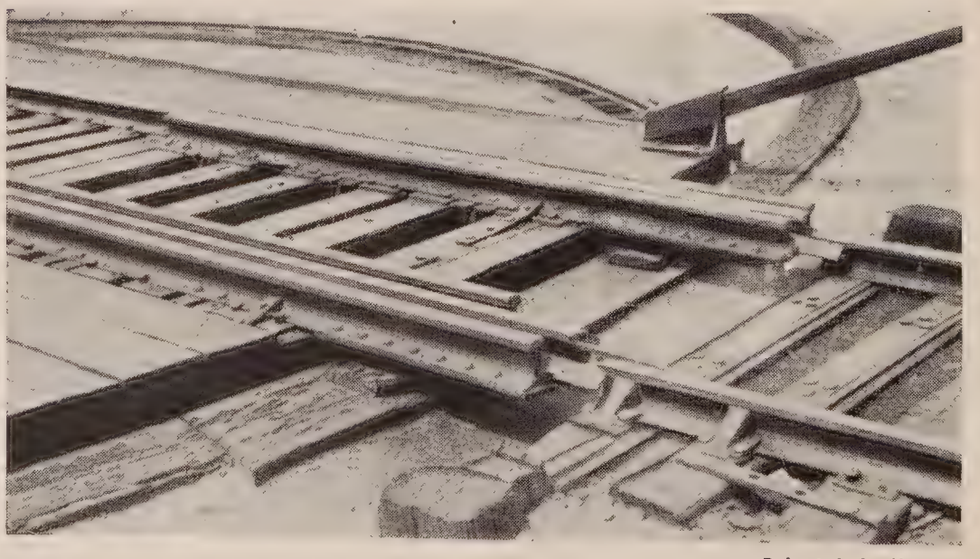
CONTRADICTING Stanley Crews' statement (Oct. issue) that the Clinchfield is now only a freight line, Carl V. D. Ehrke, 157 Massachusetts Ave., Springfield 9, Mass., quotes a letter he received from the Clinchfield's traffic manager, C. A. Smith: "We have discontinued passenger service on our line except to and from a few points in North Carolina. A passenger coach attached to a local freight train serves these points every day except Sunday. This enables local inhabitants to go to Sprucepine or Marien on shopping trips and return the same day. We do not advertise this schedule because it was initiated only for the convenience of people in an area insufficiently served by highway or not served at all." •

CALIFORNIA'S newest rail line, the one-and-a-half-million-dollar Burney extension of the McCloud River Railroad, is scheduled for completion a few weeks hence, we learn from Flake Wills, president. Already carloads of revenue freight are moving north out of Cayton Valley. As soon as the 32-mile extension is completed, McCloud River Lumber Company will begin logging in the Burney basin. It is estimated that their operations will last 50 years, thereby assuring the railroad sufficient traffic to pay for the new line.

McCloud River Railroad operates from the town of Mt. Shasta on the SP, across the shoulder of the mountain into McCloud and over to a connection with the Great Northern at Hambone. There is also a branch that runs to Pondosa, 30 miles south of McCloud. The extension leaves the Pondosa line at Bear Flat. From there to Dutch Creek, 10 miles, an existing logging line furnished the right-of-way. The McCloud outfit completely overhauled it, laying heavier rail, new creosoted ties, and lava rock ballast. At Dutch Creek new construction began with deep cuts and high hills.

The iron horse's arrival at Burney will be celebrated by driving a golden spike into the traditional polished hardwood tie. Arrangements are being made by the Central Coast Railway Club, Box 783, San Jose, Calif., assisted by the Burney Chamber of Commerce. A "Gold Spike Special" excursion is tentatively scheduled for Memorial Day week-end. Very few railfans have ever witnessed, much less photographed, such an event. •

C&EI OFFICIALS were much surprised recently when a 37-year-old check for 29 cents was presented for payment. W. E. Blue, a Chicago & Eastern Illinois brakeman, tried in vain to cash the check at a Chicago bank. Then, although the check was marked "Valid for 90 days only" and made out to C&EI engineer J. C. Cole, now deceased, C&EI treasurer Walter Templeton dug into his own pocket and paid the money to Mr. Blue, son-in-law and



Robert A. Le Massena

Locomotives were too big for the Rutland's old hand-operated turntable at Bellow's Falls, Vt., so company employes lengthened the rails.

sole heir of the deceased. Under the law, the railroad company could not legally pay such a check. •

Mary Patricia

BECAUSE her father is a Lackawanna engineer and other kinfolk follow the singing rails, it is only natural that railroads should fascinate Mary Patricia Woodworth, 28 Taylor St., Cortland, N. Y.

"Lehigh Valley tracks run behind my home," she writes, "and in my 18 short years of existence I have been exposed to so many engines that I regard myself as part locomotive. Steam-engine cabs intrigue me. My father, William E. Woodworth, has iron on his blood and so have I. The son of a Lehigh Valley conductor, he had two uncles who were engineers, while his brother Benjamin worked as a brakeman, and has several railroading cousins; one is a New York Central train dispatcher.

"Father began firing on the Valley in 1922, but went over to the Lackawanna in '23 and has been there ever since, at present working in the Binghamton yards. Sometimes he relates his experiences. One chilly March morning 15 years ago he was called as an extra fireman on a freight of about 100 cars. The road needed extra men because of stoker trouble. After traveling 15 miles, they stopped near the top of a grade to set up retainers and test their brakes. Then they headed down the long hill toward Syracuse.

"They hadn't gone far before the engineer tried to slacken speed by slamming on the air, but the brakes would not hold. He made an emergency application, but to no effect. By this time the train was bounding downhill at about 50 miles per hour on track with a 50-mile speed restriction. The engineer blasted his whistle, setting the fireman and head brakeman to work at tieing down the hand brakes. Meanwhile, my father stepped out onto the running board to see if the air pumps were operating. They were.

"Finally, after a wild ride of five miles downhill, the train was stopped by a leakage of train-line air—right in front of a red block! Another train stood waiting there. The runaway barely escaped plowing into its rear. Later, after catching their breath and swallowing hard, the runaway's crew found that their hoses were frozen solid!"

Engineer Woodworth's daughter is as talented as she is pretty. Not long ago she won first prize with her essay, "Building Through Citizenship," in a contest sponsored by the local VFW Auxiliary. She travels quite a bit on her father's passes. "Being a railroader's daughter," she finds, "is truly exciting. I am proud of my father, but am disappointed when he works out of town because we may not see him for a week at a time."

On October 30, 1931, Mr. Woodworth, then on a regular run, had another brush with death. Mary tells the story: "A tractor trailer ran into the left front end of his engine at a crossing just out of Cortland. The impact turned the engine completely around and tipped her over. It all happened so quickly that, while this was going on, the rear of the locomotive hit the trailer. My father was at the throttle and was thrown across the cab into his fireman's lap.

"At that instant the car just behind the engine, loaded with feed, towered above the overturned locomotive. 'This is the end,' my father said. But the car missed them by inches and fell into a ditch. Forty-nine tons of steel in the truck had collided with a 44-ton locomotive, but no lives were lost. Some people said that luck saved them. I say, the hand of God." •

SHIP'S OFFICER in the Ann Arbor carferry fleet, A. C. Frederickson, Box 272, Frankfort, Mich., comments on "Rails Across the Great Lakes" by Freeman Hubbard (Nov. issue): "All the boys aboard here found it interesting and a swell job. Being carferry men, they should know."

Thomas W. Scott, 300 S. Goodwin Ave., Urbana, Ill., points out that not all the Lake Michigan trainferries now burn oil. "You say the Grand Trunk steamers converted to oil in 1947," he writes, "and this is true. However, these three vessels are the only ones in cross-lake service that do burn oil. The other 14 burn coal, even the newest *Badger* and *Spartan* of the Chesapeake & Ohio fleet. To be sure, the seven C&O steamers are automatically fired, so there isn't much of the traditional shoveling in their fire-rooms.

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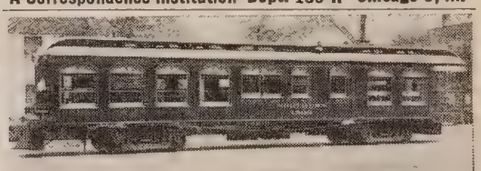

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of ashes, exactly as before. In fact, most of the bulk-ore and grain ships sailing the lakes are still hand-fired coal-burners. With coal so cheap at Toledo, there is little tendency to break away to fuel oil.

"Up to now, all the carferries are steam-propelled. The older ones use triple-expansion reciprocating engines. The C&O *City of Flint* and *City of Saginaw* are turbo-electric, but the C&O has returned to reciprocating power for three newer boats and has re-engined two more. Ann Arbor officials are on the verge of ordering a new ferry, its first new one since 1928."

The "longitudinal" carferry route inaugurated in 1890 between South Chicago, Ill., and Peshtigo Harbor, Wis., was operated not by the Chicago & North Western but by the Lake Michigan Car Ferry Transportation Company in connection with the Wisconsin & Michigan Railway (now part of the C&NW), according to H. G. Faithorn, 681 Market St., San Francisco.

"Both the carferry line and the railway were owned by the John R. Walsh interests," he states, "and managed by my uncle, John W. Faithorn, for whom towns in Michigan and Illinois were named." •

PHOTO in our October issue, page 28, showing the tower at Finch, Ont., Canada, where CPR tracks cross the New York Central caught the eye of Jack Haggerty, Box 51, Boston, Mass., who writes:

"That picture gave me a case of nostalgia, for I worked in that tower in August, 1908, on my first job for the Canadian Pacific. At that time I created quite a sensation with the agent and his towerman by claiming I'd never before worked in a tower. They could not understand how I had learned so quickly to handle the machine. It took me just 15 minutes to demonstrate my ability, and so I was permitted to start right in on the job.

"As time went on, they grew more skeptical. At length I let the cat out of the bag by inadvertently mentioning a detector bar. Then I admitted that, although I had never been on a payroll as a full-fledged towerman, my first job had been that of a lampman at a 36-lever Boston & Maine tower in 1905.

"The original Finch tower had only 16 levers. I believe it was destroyed by fire years ago and replaced by the one in the photo. While I worked there, the road was being double-tracked eastward from Finch to Vaudreuil, Que., but I didn't stay to see it completed.

"One morning an amusing thing happened. I had a 31 order for a work train. A man whom I thought was the hogger came up into the tower to get it. I halted him with, 'The conductor should sign that order.' He said, 'Oh,' and clomped downstairs to the caboose. There (I learned later) he addressed the engineer as Tobin, his own name, saying: 'The operator insists that train orders be signed by the conductor, not the hogger.' So, with his own peculiar sense of humor, the hogger signed Tobin's name to the flimsy, and everyone was happy. In those days we never used train-order hoops. We'd roll the flimsy

Delaware, Lackawanna & Western Railroad

Lackawanna engine-house and wooden water tower at Ithaca, N. Y., as it looked in 1907, before Mary Woodworth's father began working on DL&W.

into a ball and hold it lightly in our fingers, and the crew flicked it up as they passed." •

HAYWIRE MAC'S piece, "The Boomer's Bag o' Tricks" (Sept. issue), did the boomer clan proud, according to Frank V. Powers, Canadian National engineer, 17 McGowan Ave., North Kamloops, B. C., Canada.

"That was a masterpiece and no fooling," he writes. "There was more solid enjoyment in 'Bag o' Tricks' than in anything else I've ever read about the genus Boomer. I wish I could remember just what part of the Canadian Northern I worked on with Haywire Mac." •

A PILGRIMAGE over the abandoned properties of the Missouri & North Arkansas yielded some interesting relics to Ralph Cooper, 2632 Troost Ave., Kansas City 8, Mo., and his pal, Harold Henre. "We also visited the remaining 70-mile segment between Seligman, Mo., and Harrison, Ark., now operating as the Arkansas & Ozarks Railway," he writes. "This freight line owns two diesel switchers, two cabooses, and several work cars. The M&NA ceased running in 1946, following a strike of employes. Two years later the line between Cotton Plant and Harrison was abandoned, leaving behind many years of financial headaches." •

OUR congratulations to Gordon Huffines, who has just been stepped up from managing editor to editor of *Railway Progress*, an entertaining and informative magazine published monthly by the Federation for Railway Progress, 1430 K St., N.W., Washington 6, D. C. •

IDENTIFYING himself as the man pictured on page 19 of our November issue, Paul T. Fitz Patrick, 1173 W. Dale, Muskegon, Mich., claimed and is now receiving the year's subscription to *Railroad* that we promised. "I was second assistant engineer on the Grand Trunk Western carferry *Madison* when the picture was taken in our engine room." •

ENGINEER on the Kansas City Terminal, with 37 years of locomotive service, Ralph R. Ridenhour, 125 N. White Ave., Kansas City, Mo., tells us that as a direct result of reading P. A. Anoe's article, "Last of the Narrow-Gages" (June '54 issue), he journeyed to Colorado and took a trip on the narrow-gage Silverton line of the old Denver & Rio Grande Western.

"It is one of the most scenic rides you could take on any American railroad," he reports. "Engine 476 pulled an eight-car train carrying 225 passengers and our brakeman served us all with coffee made in a big pot on the caboose stove. This line does not operate in winter but will resume in the spring. Round-trip fare, $3.30.

"First time I saw a narrow-gage passenger train was in 1923 at Santa Fe, N. M. In recent years I have been getting quite a kick from reading about narrow-gages in your magazine, including Gilbert A. Lathrop's fiction stories, and finally my enthusiasm worked up to the point of leading me to take the Silverton trip. And that, for a locomotive engineer, is something!" •

DISAPPOINTED. "*Railroad Magazine* has been No. 1 on my hit parade for many years," writes Pfc. Allan H. Berner, US 51,279,196, HQ. 7th Infantry Div. (TI&E), APO 7, care of Postmaster, San Francisco, Calif. "I've always enjoyed reading its wealth of information and stories. But most of all I like your photos.

"When I heard *Railroad's* page size was being enlarged and the quality of its paper improved, I was very pleased, since that meant you would publish large pictures of steam and juice equipment suitable for framing. Some pictures of this type have appeared. But I am disappointed to note that you are cluttered up with a lot of silly 'human interest' shots, instead of sticking to good impersonal views of railroads and transit lines. Why not give the readers what they prefer?"

Private Berner is right, insofar as he and many other readers are concerned. There is much to be said for rail photos that do not show people.

On the other hand, should we ignore the thousands of readers who *do* like to see an occasional human being in our pictures? Surely, the railroads are not built, operated, and maintained by robots and zombies. In order to satisfy *both* groups of readers, our policy is to print *both* types of photos, with the emphasis on those that show railroad equipment but no people in sight. Maybe you think it's easy to please everybody. Just try it some time! •

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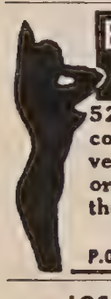

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use in illustrating it, with emphasis on the word *unusual.* We have plenty of ordinary broadside views and conventional train shots. •

A READER of *Railroad Magazine* since 1911—except for 1919-'29 when it was not published—that is the proud boast of J. L. Watson, 1416 W. 52nd St., Los Angeles 62, Calif. How many readers can beat that record?

"Each month," he tells us, "I buy four copies, mailing one each to trading pals in Canada, England, Australia, and Panama. Those fellows send timetables, passes, tickets, train orders, and other railroadiana for my collection. I have 615 passes, one of which is 100 years old; train orders from 300 railroads all over the world, including one from the Canadian Pacific dated 1882, and tickets from just about every country."

Stephen G. Rich, 13 Otsego Rd., Verona, N. J., reading *Railroad* since October, 1906, finds two errors in the illustration of "Narrow-Gage Man" (Nov. '54); the story said the engine was diamond-stacked and her bell was set elsewhere. (Same issue) "Gothic" was incorrect in a caption on page 26. •

ONE MAN'S OPINION. Louis S. Kroack, 506 Larimer Ave., Turtle Creek, Pa., urges us to: "Print more fiction and illustrated features, including maps, that deal with steam and electric railroading in the past, rather than the dieselized present." •

SEPTEMBER and October issues of *Railroad Magazine* were good," enthuses Hal Carstens, managing editor, *Railroad Model Craftsman,* Ramsey, N. J., "but November and December were even better. Recent issues bring back the early thrills I had when I started my hobby under the aegis of what was then called *Railroad Man's Magazine.*" •

ALASKA RAILROAD should have connections with Canada and the United States," writes James E. Davis, 78 Warren Pl., Ridgewood, N. J., commenting on Harold Cook's "Railroading in Alaska" (Oct. issue). "A connection could have been built with the money the U. S. Government spent on the Alcan Highway." •

LONG-TIME reader Karl E. H. Moltrecht, 1115 Brooklyn, Ann Arbor, Mich., likes our improved format but suggests: "Why not cut out model railroading and leave that field to magazines which cover it exclusively? Your true tales and fiction are good. However, I wish you'd use some of the present streetcar space and all of the model space in printing more fact articles on railroad construction, history, and operation. I am an assistant professor of engineering at the University of Michigan." •

MORE NON-FICTION material in *Railroad* is urged by B. Murton, 7 Allendale Rd., Plymouth, England. He adds: "Model railroading is out of place in your magazine. Other publications cover the field better than you can—unless you were to cut down on all other subjects, which I don't want. I say this despite the fact that I myself am interested in model railroads."

Another British letter comes from F. F. Clough, *Kingswood,* Pen-y-Bryn Rd., Upper Colwyn Bay, Wales: "With regard to that article you are going to publish on the subject of 'The Last Interurbans,' I will say that here in Wales an interurban-tramway, the Llandudno & Colwyn Bay Electric Railway, runs both single-deck and open-top double-deck cars. The former are nearly 50 years old and have Westinghouse equipment. L&CB cars have no airbrakes, only manual and emergency electric track brakes. The line is about six miles long and is 3½-foot gage.

"Next Saturday I will go on a railfan trip. Such trips are very popular over here. Most of them are sponsored by fan clubs, the Railway Correspondence & Travel Society and the Stephenson Locomotive Society. The latter will run next Saturday's trip in conjunction with the Manchester Locomotive Society. Like you folks in America and Canada, we especially like the trips operated over lines long closed to ordinary passenger service."

We now hear from K. Bailey, 15 Ryelands St., Hereford, England. (Incidentally, doesn't any Britisher have a first name, or do they all stick to initials?) Mr. Bailey writes: "I wish you'd publish more articles dealing with individual roads, preferably the lesser-known roads. I am interested in the Pittsburgh, Shawmut & Northern. Can any reader supply information on that now-defunct line? I greatly admired the photographic cover on your June '54 issue and am glad to know you are having more of them. If at any time I can help you with British railway information, don't hesitate to ask." •

RAILROAD HOBBY CLUB

STEAM POWER

COMMENTING on an item in the October *Mail Car,* Larry Lore, a furloughed Pennsylvania-Reading Seashore Lines fireman, from Collingswood, N. J., writes: "It is true that the Philadelphia Terminal Division of the Pennsy is all dieselized and electrified, but in Camden, N. J., is one of the last steam roundhouses on the Pennsy system, serving the Atlantic Division, the PRSL, and a few passenger trains of the New York Division.

"About 30 steam engines work out of or lay over there every day—Pennsy B-6's, K-4's, E-6's, H-10's, and Reading G-3 passenger engines. The small Atlantic Division, consisting mainly of Pavonia yard in Camden and the Mt. Holly-Toms River Line, still uses steam for most jobs, including a couple hand-fired E-6's between Camden and Pemberton on passenger trains.

"PRSL uses steam on passenger trains between Camden and Atlantic City, Hammonton, and Wildwood. As business increases in the summer, still more is added. PRSL also has a few B-6's in the area as well as H-10's on a few of its road freights out of Camden. Steam also operates in the Paulsboro, Millville, and Atlantic City yards."

This month's Steam Power list comes from Luther Terry, Jr., Wood, Wis.; Donald A. Pope, Richmond, Ind.; Ben Lindner, Chambersburg, Pa.; John H. Wallace, San Francisco; Jim Fritts and Ted Gleichmann, Chatham, N. J.; and Clifford Oakes, Norwood, N. Y.

Baltimore & Ohio—Hyndman (east end of Pittsburgh division) to Sand Patch, Pa.—2-10-2's, 4-6-2's, 2-8-2's, 4-8-2's, 2-10-2's, 2-8-8-4's; Martinsburg, W. Va.—2-8-2, 2-10-2.

Camino, Placerville & Lake Tahoe—Calif.—1 Shay.

Canadian National—Niagara Falls, Ont.—0-6-0, 0-8-0, 2-8-0, 4-6-2, 4-8-4.

Maryland & Pennsylvania—Baltimore, Md.—0-6-0.

Milwaukee Road—Milwaukee, Wis.—200 class 4-8-4's, 400 class 2-8-2's; Chicago & Madison Division—4-8-4's.

Pennsylvania—Columbus, O., yards—125 types ranging from B-6, L-1, H-10, M-1a, I-1, J-1a to K-4 in storage or operation; Hagerstown, Md.—2-10-0, 2-8-2.

Southern Pacific—San Jose, San Luis Obispo, Colton, Indio, Los Angeles (Taylor roundhouse), Calif.

Western Pacific—though dieselized, No. 94, a 4-6-0 is occasionally run.

ITEMS sent to this department are printed free, in good faith, but without guarantee. Write plainly. No entry longer than 28 words will be accepted—except those dealing with back numbers of this magazine. Address *Railroad Magazine,* 205 E. 42nd Street, New York 17, N. Y.

Because of time needed to edit, print and distribute the magazine, all material should reach us nine weeks before publication date.

Use these abbreviations: *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage; *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train; *rr.*, railroad.

The term *tts.*, refers to public timetables, unless preceded by *emp.*, when it means employe's (operating) timetables.

(R) indicates desire to buy, swap or sell back issues of *Railroad Magazine.* (Specify condition of each copy.)

(*) indicates juicefan appeal.

SWITCH LIST

ALLEN BAIRD, 259 N. 10th St., Colton, Calif., sells loco rosters, too many to list.

CHAS. BETHGE, 150 N. 7th Ave., Checktowage 25, N. Y., buys 5x7 or larger pix U. S. locos, trains, yards; also any size negs.; write first.

BRUCE BLACK, 1410 Gilbert Ave., Downers Grove, Ill., offers Ansco camera size 616 P6.3 lens, TB, 25, 50 and 100 sec. shutter speeds, $19. Swaps Soo Line, GN, etc., size 616 negs. for same roads.

(R) LYNN BRYANT, 2815 S. Lee St., Oklahoma City 9, Okla., wants June '45, Nov. '44, Jan. '43, Dec. '51 *Railroad Magazine;* also Oklahoma Ry. pix.

(*) BOB BUCKLEY, 183 Conant Dr., Buffalo 23, N. Y., will trade 8mm color movies Rochester Subway for Sand Springs, Ft. Dodge, Council Bluffs, PE, other inters.; write first.

(*) JIM BURCHARD, Box 293, East Haven, Conn., wants streetcar negs., any system, U. S., Canada; send negs.

(R) YEAGER BUSH, 7542 33rd Ave., N. W., Seattle 7, Wash., will buy back issues (single copies) *Railroad Magazine,* any date up to '52.

BOB CHAFFIN, 47 Estes St., Lynn, Mass., sells size 616 negs. B&M steam, diesel; also 616 prints B&M, MeC, BAR, NH, B&A, CV, RUT; state list wanted; wants RLHS CV *Bulletin.*

(*) VINCENT CONSERVA, 15 Lawrence St., Yonkers 5, N. Y., wants pix, info, 3rd Ave. trolleys, buses of N. Y. City, Westchester; send lists.

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N. W. SCHOOL OF TAXIDERMY, 4201 Elwood Bldg., Omaha 2, Neb.

(*) RALPH COOPER, 2632 Troost Ave., Kansas City 8, Mo., wants pix, tts., info., LV, Milw., Alton, Y&MV, KCS, QO&KC, KC&NW; offers tts, pix, etc., of old M&A and M&NA.

(R) JACK DAVIS, 1013 Haig Blvd., Lakeview, Ont., Canada, will swap rr. and model mags. and handbooks for U. S., Canadian or foreign stamps; send for list.

VIN DELLA TORRE, 115 Circle Dr., Teaneck, N. J., wants pix of any rr., espec. Staten Island: write first.

ED de VITO, 28 Dean Ave., Warehouse Point, Conn., has new 30-page booklet list of rr. photos ready, over 200 roads; list 10c, sample photo 5c extra.

RUSSEL DUMKE, Box 282, Elyria, O., wants bldrs. catalogs, prints, photos, negs., plans on Shay, Climax, Heisler, Willamette, Baldwin geared locos, Mason bogie, Vulcan duplex; *Model Rider* and *Craftsman*; sell or trade.

DEREK FAULKNER, 2428 Guthrie Ct., Los Angeles 34, Calif., wants to hear from fans.

(*) STEVE GEROLAMO, 634 Ellsworth Ave., Bronx 65, N. Y., buys 35 mm. color slides trolleys or interurbans; send lists first.

(*) BOB GROSS, 347 N. Curgon Ave., Los Angeles 36, Calif., will buy or trade items from L. A. Transit or PE only; trfs., etc., any trolley system, U. S., Canada.

G. R. GRIFFIN, 1495 W. 4th St., San Bernardino, Calif., will trade 10 SP steam pix for Aug. '35 *Railroad Magazine*.

RALPH HULL, 223 Enola Rd., Enola, Pa., will trade PRR emp. tts. of 5 divisions for any old switch keys, or sell 25c ea.

(*) H. R. JOHANNESSEN, 911 Sudbury Rd., Silver Spring, Md., will swap bldrs.' numbers PRR steam, elec., diesel locos; has same for most steam locos.

A. W. JOHNSON, 5843 W. Huron St., Chicago 44, Ill., will buy pix C&NW train on Iron Horse Tour last Sept. 12, taken along the way by persons he saw from train.

(R) ARNOLD JOSEPH, 2512 Tratman Ave., New York 61, N. Y., sells back copies *Railroad Magazine*, '31-'54; *Trains*, '40-'54; *Model R'der*, '34-'54; buys collections of mags., lists for 3c stamp.

OLIVER KENYON, 403 E. 4th St., Wilmington 1, Del., wants negs., sizes 116-616 and p.c., boxcars (broadside only), all steel cars A&EC, CV, CN&L, DW&P, E&LS, FDD&S, etc.; write first.

H. M. KNIFFEN, Box 81, Poughquag, N. Y., will sell p.c. and 5x7 pix many roads; list 10c.

STAN KISTLER, 3521 Blanche St., Pasadena 10, Calif., has new list quality size 116 negs. AT&SF, SP, UP, for sale; list and sample, 10c.

GLENN KRUSCHKE, Box 501, Largo, Fla., wants 116 or smaller locomotive negatives, steam or diesel, from RI, Erie, IC.

BOB LARSON, 831½ E. Grand Ave., Eau Claire, Wis., will swap steam, diesel photos; 3c stamp for list.

LARRY LIGHT, Box 334, Bucknell Univ., Lewisburg, Pa., will trade comp. set recent NKP emp. tts., all 10 divs., good cond. for recent N&W rule books, good cond.

SCOTT McCORMICK, Princeton, Wis., wants to give info. to people interested in preserving memory of steam tractor; Northeastern Wis. Steam Club; or write to R. Gordon Clark, 1224 Marquette Ave., Green Bay, Wis.

HAL McMICHAEL, Waterford, Ontario, Can., offers p.c. pix CNR, CPR, C&IM, NYC, TH&B, WAB, etc., on approval, 12 for $1, 3 samples 25c.

(R) R. R. MAGUIRE, 23 2nd St., Medford, Mass., will sell or trade '42 to '53 *Railroad Magazine*, exc. May '53; all good cond. with covers; also B&M emp. tts. '21-'57, exc. '22, '23, '27, '34, '36, '44, good cond.; won't break sets.

DAVE MARTINDELL, 3447 Kirklawn, Topeka, Kan., has size 616 negs. steam UP, CB&Q, NP, C&S, SOO, others, to trade for lines west of Mississippi, list free.

(R) ART MATOTT, 3621 Indiana Ave., Ft. Wayne 6, Ind., will sell following mags., all good cond., unclipped, with covers; '35 to '45 *Railroad Magazine*, 67 issues, '41 to '44, '46 *Trains*, 23 issues, '38 to '46 *Model R'der*, 18 issues; '39 to '40, '42 *Model Craftsman*, 8 issues; all 126 issues, $20, or 20c per issue; buyer pays postage; list, 3c.

(*) ARA MESROBIAN, 7410 Connecticut Ave., Chevy Chase 15, Md., wants Ira Swett's *Interurban Specials*, No. 1, 3, 4.

BILL MILLSAP, 409 S. Lincoln St., Robinson, Ill., will pay top prices for good C&EE, N&StL pix, also SAL, L&N; size 116.

(R) BILL NELSON wants to sell many old issues *Railroad Magazine* dating back to 1906 but forgot to state his address.

SCOTT NIXON, SFC Bldg., Augusta 5, Ga., collects 16 mm. movies trains, rr. scenes; envs. with rr. or tr. corner cards, p.c. or rr. scenes, 2x2 slides of trains, black and white or color; rr. book match covers, rr. stationery; sound effects, records, tape.

H. Reid

Trainman J. I. Kelly raises his lantern to signal the Chesapeake & Ohio's No. 48 by on time at Norge, Va.

WILL RADCLIFFE, Box 375, Webster, Mass., wants certain NH and n.g. negs; has size 616 negs. of NH, D&RGW n.g., B&O, B&M, Edaville, CV, N&W, others, to swap.

NORM REINHARDT, 896 Main Ave., Passaic, N. J., will buy C&O local tts. new or old, old C&O through train tts. before Dec. '52, 10c ea.; also any size negs., good cond; 5c ea. for negs. before '34.

PETE REINHARDT, 896 Main Ave., Passaic, N. J., will trade negs., any size, good cond.; write first.

(*) ED RISLEY, RFD 2, Hartswood Rd., Dover, N. H., wants trolley tokens or metal fare checks, good cond., brass pref.

(R) BOB RUMER, 630 W. Chew Ave., Philadelphia 20, Pa., will sell *Railroad Magazine*, good cond., '36 to date; over 300 8x10 pix, mostly steam; *Trains* '41 to date, good cond.

FRANK SEIFFERT, JR., Box 21, Orange, N. J., wants rosters of CNJ, DL&W, FEC, LV, L&NE, Rut.; state dates and prices; will pay cash or trade for pix mdse. eqmt; state which.

(R) BEN SMITH, 265 Tompkins Ave., Brooklyn 16, N. Y., will sell back issues *Railroad Magazine*, '30-'53; *Model Railroader*, '34-'50; *Model Bldr.*, '37-'40; *Trains*, '41-'52; Lionel AF catalogs, '30-'52; Ives, 1912-'15.

R. P. STAIR, 404 W. Hill St., Champaign, Ill., trades and sells emp. tts.; list, 3c.

FRED STECK, R 1, Reese, Mich., will sell size 616 negs. and prints of aband. DC&S.

(R) STAN F. STYLES, 19 W. 18th Ave., Vancouver 10, B. C., Canada, sells negs., pix, size 616, CPR, CNR, BCER, NP, others, scenics; has 100 issues *Railroad Magazine* from '45; surplus pix, 5c ea.

(*) DICK TESCH, 6853 Northwest Hy., Chicago 31, Ill., wants 616 size negs., elec. lines Cuba, Mexico.

AUG. THEME, Jr., 1306 St. Michaels La., Richmond, Va., offers size 616 steam loco pix, ACL, C&O, SAL, SR, Vgn., others; list, 3c; wants pix W. Va. logging roads.

(R) W. S. TITLOW, 1533 Jefferson St., Latrobe, Pa., will sell *Railroad Magazine* from '37, *Trains* from '40, rr. books, emp. tts. other railroadiana; list, 3c.

F. M. SWENGEL, 256 Grandview Ave., Glen Ellyn, Ill., will sell loco bldrs. pix, 4000 items, 3700 bldrs., 300 other, many rare; compl. col., $300.

(*) LARRY VODRA, 715 Kieffer St., Wooster, O., wants pix, maps, info., etc. Western interurbans, esp. PE; also back pubs. of interurbans; write first.

BOB WARD, Box 214A, Schwenksville, Pa., will trade loco pix for auto license plates, any state, country or province, any yr., or buy outright.

(R) DOUG WILLIAMS, Rt 1, Box 160A, Coolidge, Ariz., will trade Oct. '54 *Railroad Magazine* for Sept. '54, Aug. '54 for June '53; also Sept. '54 for Oct. '54, Oct., Sept. and Aug. are good cond.

(*) GARY WILSON, 353 Penn St., Pasadena 6, Calif., wants pix W. & Old Dominion, Portland Trac., Piedmont & N., will trade PE for them; wants to hear from Mr. Murihead; lost his address; list and sample of RE, 10c.

(*) DICK WONSON, 263 Belmont St., Fall River, Mass., has trolley pix, old and new, NE, NY, NJ, Southern; list, 3c.

JOHN WEIGHTMAN, Box 696, Sacramento, Calif., will make copy neg, size 124, from any size rr. pic, $1.

WALTER ZULLIG, 475 Oak Ave., Maywood, N. J., sells p.c. pix B&M, NYS&W, NYC, Erie, LIRR, CNJ, NYNH&H, Rdg., PRR, DL&W, B&O, Raritan River; list, 3c.

MODEL TRADING POST

LEO BARIS, 118 Sherman Ave., New York City, will swap AF eqmt. for Lionel; write for list. Will buy AF 774 floodlight, 600 cross. gate, 501 girder bridge.

BUD CHRISTEN, 572 Conkey Ave., Rochester, N. Y., will trade Lionel *Hiawatha* 4 cars for 2330 GG-1 or 773, 763 Hudson or 073 hand or elec. switches.

RUSS CHRISTENSEN, 21 Fernwood Pk., Rochester 9, N. Y., wants pre-war 072 manual switches, Lionel catalogs 1931, '36, '40, '42, '46, complete.

DON FRASER, 26 Peppertree Dr., Portuguese Bend, Calif., wants scale model live steamers, esp. 1-in., finished or incomp., also 1-in scale cars.

K. E. GOODSPEED, Box 411, Port Henry, N. Y., has many built-up HO locos, cars, to swap for O gage locos, good cond. or kits, no tinplate; $600 value; make offer.

R. P. HAHN, 675 Northampton St., Hallertown, Pa., will sell AF 572 loco and tender, die-cast, $24; Marx 999 loco, tender, $4.60; or swap both locos for O gage, new cond.

F. M. KALAHAR, 6115 N. Vancouver Ave., Portland 11, Ore., will sell 1953 Lionel 2201, W3 frt. tr., 027, 2 elec. switches, 2 manual switches, 2 r.c. transf., all like new.

JOHN KOCH, 5 Main St., Joliet, Pa., has big list AF and Lionel O gage items for sale; also *Model R'der* 1934-'46; list for stamp.

R. E. MORRIS, 19 El Camino Real, Vallejo, Calif., will trade HO and OO cars and kits for O scale and 2-rail kits and OO brass rail, or sell separately.

JULIUS RAILOA, 238 5th Ave., Brooklyn 15, N. Y., wants Lionel catalogs before '24, bound vols. *Lionel Mag.*; will pay cash or trade Lionel 072 items.

BEN SMITH, 265 Tompkins Ave., Brooklyn 16, N. Y., has Lionel 700EW, 763EW, 773EW Hudson locos; Pennsy (0-6-0) 700 series scale locos 225E, 226E, 263E, 260, 256 etc.; wants old trains.

TOM WALSH, 245 S. 3rd Ave., Mt. Vernon, N. Y. offers 2 sets Marx 027 gage, comp., good cond., $15 ea.

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